Instructional Program Review,
July 3, 2024

Program Name: The Manufacturing and Industrial Technology Program (MIT) & Welding

Degrees and Certificates offered within Program:

- MIT AAS
- Welding AAS

Statement of Collaboration
The program faculty listed below collaborated in an open and forthright dialogue to prepare this Program Review. Statements included herein accurately reflect the conclusions and opinions of the program faculty.

Participants in the review:

- Ron Carlbom, Department Chair MIT
- Sherry Cook, Dean of CTE
- Randall Tyle, Chair North Coast Mechanical JATC
- North Coast Mechanical JATC Advisory Board
- Oregon Carpenters JATC Advisory Board

Authorization:
After the document is complete, it must be signed by the Department Faculty and Vice President of Instruction prior to submission to the President.

Signatures of Department Faculty

Signature of Vice President of Instruction

July 3, 2024
Date of Submission

1.0 *Briefly describe the relationship of your program to the college's Mission, Vision, and Strategic Priorities.*

College Mission & Vision

Tillamook Bay TBCC serves our diverse community equitably through educational excellence, community collaboration, and opportunities for lifelong learning.

TBCC is the educational center of our community: responsive, innovative, empowering, and invested in the progress of all.

Strategic Priorities

- Educational Excellence & Workforce Development: Engage individuals in equitable, inclusive, and supportive learning environments that stimulate growth and prepare them with the skills they need for their next steps in higher education and the modern workplace.
- Employee Experience & Organizational Health: Continuously assess and improve our systems, processes, and overall employee experience to ensure TBCC is a healthy and effective organization that can attract and retain a talented and diverse team.
- Community Engagement & Awareness: Intentionally seek opportunities to strengthen and develop relationships with our community and build awareness of how TBCC can contribute to the health and vitality of Tillamook County.
- Equity & Inclusion: Intentionally welcoming the community into a safe and supportive environment where everyone belongs. We do this by eliminating systems barriers and embedding equity and inclusion into every facet of TBCC.

The Manufacturing and Industrial Technology Program (MIT) was designed with the intention to directly support the Mission of Tillamook Bay Community College by providing and consistently improving programs to meet the needs of a diverse student population while creating bridges to align with local industry creating opportunity for growth in TBCC's student population and building a workforce rich in diversity that will be sustainable for years to come within Tillamook County.

The goal of any CTE degree program is to ensure that our programs are relevant and meet the current and future needs of our local workforce. Our commitment is to ensure our students are workforce ready and have the skills and knowledge needed for success. The ability to move both laterally and upward through the various CTE programs provides our student population and our local workforce with a continuous advantage toward advancement in training while creating a workforce where sustainable high wage careers and lifelong learning outcomes predict success within both industry and families in Tillamook County.

Program Description

The Manufacturing and Industrial Technology Program (MIT) was designed to directly support the Vision of Tillamook Bay Community College by providing industry aligned programs guided by an advisory board of industry leaders and journey level professionals who come together to design both in scope and sequence, courses tightly aligned to the highest level of industry standards.

The intended goal of the MIT Program at Tillamook Bay Community College was to provide both content relevant training and academic content with rigor meeting the needs of our local workforce and providing students with career opportunities for advancement and lifelong learning. with a goal toward continuous improvement, innovation and creating economic stability for our student population and local workforce, TBCC strives to deliver excellence in all CTE program areas by developing and creating multiple entry and exit points by offering Apprenticeship, Certificate, and Associate of Applied Science Degrees. These pathways were designed with the intent to provide flexibility and opportunity for students to choose the pathway that best meets their needs.

The program intent was designed to give students a strong foundation in modern technologies and concepts that will lead to successful employment in the manufacturing and industrial field. The MIT program intent was to help prepare students for long term success and career satisfaction.

Program Name: MIT & Welding

The tables below summarize the courses that were conducted in this four-year period for the courses in these areas: DRF, ELT, GT, IMT, MCH and WLD. It includes all students enrolled in these courses – not just those students who are majoring in MIT or Welding.

Term	**2019**	**2020**	**2021**	**2022**	**Grand Total**
Summer	9	19	18	15	61
Fall	49	101	72	91	313
Winter	47	77	76	89	289
Spring	58	31	51	58	198
Total	163	228	217	253	861

Table 1: This table displays the number of enrollments in all the program courses, split out by term and year.

2.0 Student Enrollment and Achievement by Gender and Race/Ethnicity

Enrollments	**2018-19**		**2019-20**		**2020-21**		**2021-2022**		**Total**
All Enrollments	163		228		217		253		608
Women	5	3%	22	10%	36	17%	35	14%	63
Men	158	97%	206	90%	181	83%	217	86%	545
By Race/Ethnicity									
White	61	37%	131	57%	187	86%	192	76%	379
Latinx	55	34%	57	25%	14	6%	33	13%	126
Undisclosed Identities	47	29%	40	18%	16	7%	28	11%	103

Table 2: This table shows the number of enrollments disaggregated by sex and race/ethnicity. This is duplicated, so students are counted for each course they are enrolled in.

Analyze the achievement levels for each of the groups listed below*. *Are there differences in achievement levels across groups? Are there strategies you can implement to provide more support for these populations?

Analysis:
I noticed in the table above that it looked like there was a big drop in the enrollment of Latinx students in 2020-2021 – from 57 enrollments in 2020 to 14 in 2021. This could suggest a drop in the number of Latinx students, or comparable numbers who enrolled in fewer courses. To tease this out, I unduplicated the above data by student and year – so each cell below shows the unduplicated number of students enrolled that year by that descriptor. So, the number of Latinx students dropped, from 12 in 2020 to 8 in 2021, not as large a drop as the drop in enrollments suggested. And enrollment of Latinx students bounced back in 2022 – with 22 Latinx students enrolled.

Courses by Year/Term:

2018-2019 (n=20 sections)	2019-2020 (n-34 sections)	2020-2021 (n=40 sections)	2021-2022 (n=56 sections)
Summer	Summer	Summer	Summer
ELT 110 210 01	IMT 105 210 01	IMT 118 210 01	IMT 105 210 01
Fall	WLD 201 210 01	IMT 280 210 01	WLD 120 210 01
ELT 225 210 01	Fall	WLD 113 210 01	WLD 105 210 01
IMT 100 210 01	ELT 110 210 01	WLD 120 210 01	WLD 105 210 02
IMT 102 210 01	IMT 100 210 01	WLD 203 210 01	Fall
IMT 103 210 01	IMT 204 210 01	Fall	ELT 110 210 01
IMT 118 210 01	IMT 280 210 01	ELT 125 210 01	ELT 125 210 01
WLD 102 210 01	MCH 102 210 01	IMT 100 210 01	IMT 100 210 01
Winter	MCH 121 210 02	IMT 102 210 01	IMT 105 210 01
ELT 125 210 01	MCH 121 210 03	IMT 105 210 01	IMT 204 210 01
ELT 230 210 01	WLD 111 210 01	IMT 222 210 01	MCH 102 210 01
IMT 102 210 01	WLD 111 210 02	MCH 121 210 01	MCH 121 210 01
IMT 103 210 01	WLD 120 210 01	WLD 111 210 01	WLD 111 210 01
IMT 230 210 01	WLD 172 210 01	WLD 113 210 01	WLD 111 210 02
WLD 111 210 01	WLD 201 210 01	WLD 170 210 01	WLD 120 210 01
WLD 199 210 01	WLD 261 210 01	WLD 201 210 01	WLD 170 210 01
Spring	Winter	WLD 261 210 01	WLD 201 210 01
GT 106 210 01	IMT 104 210 01	Winter	WLD 261 210 01
IMT 106 210 01	IMT 106 210 01	ELT 126 210 01	IMT 140 210 01
IMT 200 210 01	IMT 222 210 01	IMT 103 210 01	IMT 150 210 01
MCH 135 210 01	MCH 220 210 01	IMT 106 210 55	IMT 151 210 01
WLD 112 210 01	MCH 220 210 02	IMT 150 210 90	WLD 111 210 03
WLD 199 210 01	WLD 102 210 01	IMT 200 210 01	WLD 261 210 02
	WLD 111 210 01	IMT 230 210 01	Winter
	WLD 111 210 02	MCH 220 210 01	DRF 270 210 01
	WLD 112 210 01	WLD 102 210 01	ELT 126 210 01
	WLD 120 210 01	WLD 112 210 01	IMT 104 210 01
	WLD 202 210 01	WLD 120 210 01	IMT 200 210 01

	Spring DRF 270 210 01 GT 106 210 01 IMT 103 210 01 IMT 105 210 01 IMT 118 210 01 IMT 200 210 01 IMT 280 210 01 MCH 102 210 01	WLD 171 210 01 WLD 202 210 01 Spring ELT 225 210 01 IMT 170 210 01 IMT 211 210 01 IMT 280 210 01 WLD 111 210 02 WLD 111 210 10 WLD 113 210 01 WLD 120 210 01 WLD 172 210 01 WLD 203 210 01 WLD 262 210 01 WLD 280 210 01	IMT 222 210 01 WLD 111 210 01 WLD 111 210 02 WLD 112 210 01 WLD 120 210 01 WLD 171 210 01 WLD 202 210 01 WLD 261 210 01 WLD 261 210 02 ELT 201 230 01 WLD 112 210 02 WLD 112 210 03 WLD 261 210 03 Spring ELT 125 210 01 ELT 225 210 01 GT 106 210 01 IMT 118 210 01 IMT 280 210 01 WLD 111 210 01 WLD 113 210 01 WLD 120 210 01 WLD 172 210 01 WLD 203 210 01 WLD 261 210 01 WLD 262 210 01 WLD 280 210 01 IMT 140 210 01 WLD 261 210 02 ELT 202 230 01 IMT 220 210 01
Spring GT 106 210 01 IMT 106 210 01 IMT 200 210 01 MCH 135 210 01 WLD 112 210 01 WLD 199 210 01	Winter IMT 104 210 01 IMT 106 210 01 IMT 222 210 01 MCH 220 210 01 MCH 220 210 02 WLD 102 210 01 WLD 111 210 01 WLD 111 210 02 WLD 112 210 01 WLD 120 210 01 WLD 202 210 01 Spring DRF 270 210 01 GT 106 210 01	WLD 261 210 01 Winter ELT 126 210 01 IMT 103 210 01 IMT 106 210 55 IMT 150 210 90 IMT 200 210 01 IMT 230 210 01 MCH 220 210 01 WLD 102 210 01 WLD 112 210 01 WLD 120 210 01 WLD 171 210 01 WLD 202 210 01 Spring	WLD 201 210 01 WLD 261 210 01 IMT 140 210 01 IMT 150 210 01 IMT 151 210 01 WLD 111 210 03 WLD 261 210 02 Winter DRF 270 210 01 ELT 126 210 01 IMT 104 210 01 IMT 200 210 01 IMT 222 210 01 WLD 111 210 01 WLD 111 210 02

	IMT 103 210 01	ELT 225 210 01	WLD 112 210 01
	IMT 105 210 01	IMT 170 210 01	WLD 120 210 01
	IMT 118 210 01	IMT 211 210 01	WLD 171 210 01
	IMT 200 210 01	IMT 280 210 01	WLD 202 210 01
	IMT 280 210 01	WLD 111 210 02	WLD 261 210 01
	MCH 102 210 01	WLD 111 210 10	WLD 261 210 02
		WLD 113 210 01	ELT 201 230 01
		WLD 120 210 01	WLD 112 210 02
		WLD 172 210 01	WLD 112 210 03
		WLD 203 210 01	WLD 261 210 03
		WLD 262 210 01	Spring
		WLD 280 210 01	ELT 125 210 01
			ELT 225 210 01
			GT 106 210 01
			IMT 118 210 01
			IMT 280 210 01
			WLD 111 210 01
			WLD 113 210 01
			WLD 120 210 01
			WLD 172 210 01
			WLD 203 210 01
			WLD 261 210 01
			WLD 262 210 01
			WLD 280 210 01
			IMT 140 210 01
			WLD 261 210 02
			ELT 202 230 01
			IMT 220 210 01

Table 3: this table includes the courses taught by year and term.

Course Passing Rates

Overall, 92.1% of duplicated students earned passing grades. Students are described as duplicated because they were often enrolled in multiple courses, so are counted more than once in the tables below.

	2018-19	2019-20	2020-21	2021-2022	Total
Passing rate	93.3%	90.8%	90.3%	94.1%	92.1%
Women	60.0%	72.7%	77.8%	97.1%	82.7%
Men	94.3%	92.7%	92.8%	93.5%	93.3%
By Race/Ethnicity					
White	93.4%	93.1%	89.8%	96.4%	93.2%
Latinx	100.0%	87.7%	92.9%	93.9%	93.7%
Undisclosed Identities	85.1%	87.5%	93.8%	78.6%	85.5%

Table 4: This table displays the passing rate of students by year and descriptor. These rates are 'duplicated': Students may

be enrolled in more than one course, so they may be included multiple times.

These data suggest that women were passing at lower rates than men until 2021-2022, when this pattern reversed dramatically – but the number of women is quite low, so it's important to not over-interpret this change. It is a curious event though, and should be discussed.

	Passed		DFW		Total # of students enrolled
Course	# of students enrolled	%	# of students enrolled	%	
DRF 270 210 01	10	76.9%	3	23.1%	13
ELT 110 210 01	17	94.4%	1	5.6%	18
ELT 125 210 01	27	96.4%	1	3.6%	28
ELT 126 210 01	14	93.3%	1	6.7%	15
ELT 225 210 01	11	100.0%		0.0%	11
ELT 230 210 01	6	100.0%		0.0%	6
GT 106 210 01	8	88.9%	1	11.1%	9
IMT 100 210 01	15	65.2%	8	34.8%	23
IMT 102 210 01	22	81.5%	5	18.5%	27
IMT 103 210 01	19	82.6%	4	17.4%	23
IMT 104 210 01	25	92.6%	2	7.4%	27
IMT 105 210 01	19	100.0%		0.0%	19
IMT 106 210 01	15	93.8%	1	6.3%	16
IMT 106 210 55	2	100.0%		0.0%	2
IMT 118 210 01	26	96.3%	1	3.7%	27
IMT 150 210 90	5	100.0%		0.0%	5
IMT 170 210 01	4	100.0%		0.0%	4
IMT 200 210 01	15	93.8%	1	6.3%	16
IMT 204 210 01	14	87.5%	2	12.5%	16
IMT 211 210 01	5	100.0%		0.0%	5
IMT 222 210 01	19	95.0%	1	5.0%	20
IMT 230 210 01	20	83.3%	4	16.7%	24
IMT 280 210 01	8	100.0%		0.0%	8

MCH 102 210 01	20	87.0%	3	13.0%	23
MCH 121 210 01	10	76.9%	3	23.1%	13
MCH 121 210 02	7	100.0%		0.0%	7
MCH 121 210 03	6	85.7%	1	14.3%	7
MCH 135 210 01	10	90.9%	1	9.1%	11
MCH 220 210 01	10	100.0%		0.0%	10
MCH 220 210 02	3	100.0%		0.0%	3
WLD 102 210 01	28	90.3%	3	9.7%	31
WLD 111 210 01	44	95.7%	2	4.3%	46
WLD 111 210 02	26	92.9%	2	7.1%	28
WLD 111 210 10	1	100.0%		0.0%	1
WLD 112 210 01	28	90.3%	3	9.7%	31
WLD 113 210 01	16	100.0%		0.0%	16
WLD 120 210 01	40	93.0%	3	7.0%	43
WLD 170 210 01	13	92.9%	1	7.1%	14
WLD 171 210 01	10	76.9%	3	23.1%	13
WLD 172 210 01	19	100.0%		0.0%	19
WLD 199 210 01	20	95.2%	1	4.8%	21
WLD 201 210 01	24	85.7%	4	14.3%	28
WLD 202 210 01	13	92.9%	1	7.1%	14
WLD 203 210 01	10	100.0%		0.0%	10
WLD 261 210 01	37	100.0%		0.0%	37
WLD 262 210 01	6	100.0%		0.0%	6
WLD 280 210 01	4	100.0%		0.0%	4
IMT 140 210 01	4	100.0%		0.0%	4
IMT 150 210 01	5	83.3%	1	16.7%	6
IMT 151 210 01	2	100.0%		0.0%	2
WLD 111 210 03	1	100.0%		0.0%	1
WLD 261 210 02	19	100.0%		0.0%	19

WLD 105 210 01	4	100.0%		0.0%	4
WLD 105 210 02	3	100.0%		0.0%	3
ELT 201 230 01	4	100.0%		0.0%	4
WLD 112 210 02	4	100.0%		0.0%	4
WLD 112 210 03	4	100.0%		0.0%	4
ELT 202 230 01	8	100.0%		0.0%	8
IMT 220 210 01	3	100.0%		0.0%	3
WLD 261 210 03	1	100.0%		0.0%	1
Grand Total	793	92.1%	68	7.9%	861

Table 5: This displays the passing rate for each course for the entire three-year period.

Enrollment and Productivity

Total FTE earned by MIT/WLD enrollments – by year and term

Year	Summer	Fall	Winter	Spring	Grand Total	FTEF
2019	0.58	5.13	4.42	4.75	14.88	0.3100
2020	1.64	9.94	7.12	2.85	21.55	0.4489
2021	2.16	5.59	6.02	5.26	19.03	0.3965
2022	1.32	9.04	9.06	6.69	26.10	0.5437
Grand Total	5.70	29.70	26.62	19.54	81.56	

Table 6: FTEF – Fulltime Equivalent Faculty – annual FTE earned by the program divided by the full time credit hours expected of faculty each term

Fill Rate – the percentage of seats filled in each section

Year	Summer	Fall	Winter	Spring	Grand Total
2019	18.00%	34.29%	46.50%	33.14%	36.67%
2020	25.33%	63.81%	44.31%	19.75%	40.46%
2021	20.89%	37.44%	35.85%	29.39%	32.53%
2022	19.58%	36.52%	38.80%	26.76%	33.04%
Grand Total	21.04%	43.79%	40.39%	26.25%	35.33%

Table 7: The percentage of seats filled in each section.

WSCH – Weekly Student Contact Hours

Year	Sum of WSCH
2019	690
2020	999
2021	884
2022	1215
Grand Total	3788

Table 8: The total number of weekly student contact hours for all students in all classes in the program.

Program Majors

The analyses below look at the characteristics of undergraduate students enrolled at the college – comparing MIT and Welding majors with other majors. This table counts the number of students enrolled at TBCC each year, by their major for that year. This count of students isn't unduplicated. Each student shows up once in each year they were enrolled. This shows how student majors have changed, as new programs have been added.

	2019		2020		2021		2022		Total N	Total %
Major	N	%	N	%	N	%	N	%		
MIT	39	10.8 %	22	5.4%	12	3.6%	11	2.9%	84	5.7%
WELD		0.0%	10	2.5%	10	3.0%	11	2.9%	31	2.1%
Other UG's	323	89.2 %	376	92.2 %	309	93.4 %	356	94.2 %	1364	92.2 %

Table 9: Student major by year

Because there are a small number of MIT/Welding majors, compared to the entire student population, it doesn't make sense to break out the demographics by major AND split out by year. The numbers get too small. The tables below are unduplicated over the three years – so each student is counted only once.

Gender of students

	Women		Men		Other identities		Total N
Major	N	%	N	%	N	%	
MIT	8	9.5%	76	90.5 %		0.0%	84
WELD	7	22.6%	24	77.4 %		0.0%	31
Other UG's	885	64.9%	466	34.2 %	13	1.0%	1364
Grand Total	900	60.9%	566	38.3 %	13	0.9%	1479

Table 10: Student major by sex

There has been notable change in the participation of women in these programs. 10% of MIT majors were women during this 4 year period, compared with no women during the previous program review period. The Welding major is somewhat new, so there's no previous data to compare to, but seven women (23%) have majored in Welding in the last four years.

Race/ethnicity of students:

	White		Latinx		Other		Total N
Major	N	%	N	%	N	%	
MIT	55	65.5 %	18	21.4%	11	13.1 %	84
WELD	27	87.1 %	3	9.7%	1	3.2%	31
Other UG's	976	71.6 %	275	20.2%	113	8.3%	1364
Grand Total	1058	71.5 %	296	20.0%	125	8.5%	1479

Table 11: Student major by race/ethnicity

About 21% of MIT majors are Latinx, which is comparable with the general student population. Latinx students are underrepresented in Welding. Before 2021-2022, there were no Latinx students majoring in Welding, but currently there are three (10%).

Student Success

The table below reports the outcomes for new undergraduate students at TBCC. The tables below compare the persistence and retention rates for both MIT and Welding majors (major reported at admission) with all other majors. This is a different sampling approach than the previous analyses so the totals will not match other samples.

Persistence:

	Persisted		Did not persist		Total N
Majors	N	%	N	%	
MIT	13	65.0%	7	35.0%	20
WELD	9	75.0%	3	25.0%	12
All other Majors	241	73.7%	86	26.3%	327
Grand Total	263	73.3%	96	26.7%	359

Table 12: Fall to winter persistence rates

Retention:

	Retained		Not Retained		Total N
Majors	N	%	N	%	
MIT	10	50.0%	10	50.0%	20
WELD	6	50.0%	6	50.0%	12
All other majors	131	40.1%	196	59.9%	327
Grand Total	147	40.9%	212	59.1%	359

Table 13: Fall to Fall retention rates

2.1 (CTE Programs Only) List the certifications students are able to earn through participation in your program.

Graduates

Typically we measure completions using a cohort rate – meaning we track the group of new students to TBCC over 3 (for full-time students) or 4 years (for part-time students), and then report the percentage that completed a certificate or degree. Because of the lag time, we have completion rates for students who began at the college for the four-year period 2016-2019. The first tables show the completion rate for MIT majors compared with that of all other students.
Because the Welding degree is new, there were no Welding students in these cohorts.

Full Time Students:

	3 Years		more		Did not complete		Total n
Row Labels	n	%	n	%	n	%	
MIT	4	50.0%		0.0%	4	50.0%	8
All Other Majors	84	25.5%	3	0.9%	242	73.6%	329
Grand Total	88	26.1%	3	0.9%	246	73.0%	337

Table 14: Completion rates for full-time students

Part Time Students:

	4 Years		more		Did not complete		Total n
Row Labels	n	%	n	%	n	%	
MIT	0	0.0%	0	0.0%	7	100.0%	7
All Other Majors	35	11.0%	10	3.1%	273	85.8%	318
Grand Total	35	10.8%	10	3.1%	280	86.2%	325

Table 15: Completion rates for part-time students

The MIT major has a small number of student majors, so it's important not to over interpret these results. Half of the eight full-time majors completed the degree, but none of the seven part-time majors completed.

2.2 Other Data

Analysis

Due to the structure of the program which is inherently designed for limited duration of enrollment, and the limitation in data collection, it was challenging to evaluate trends over time. Data analysis raises additional questions that would need further examination and possibly additional data points to make informed decisions about program quality and improvements.

2.3 Strengths, Weaknesses, Opportunities, Challenges (SWOC)

What are the strengths of your program as indicated in the above data?

Student success rates by course are strong, indicating that the courses are valuable. The enrollment numbers do suggest TBCC's Welding program is engaging and perhaps if marketed to the correct student population would be sustainable on its own, if partnerships with local industry can be added to support high wage/high demand jobs to future graduates.

A weakness was identified in the data system, in that apprentices are not easily coded and tracked like other student majors are. This makes it difficult to monitor trends in the performance of the program over time. Course enrollment suggests high rates of apprenticeship in the student population as well as the high quality of student instruction from faculty and adjunct faculty who continually seek to align curriculum to industry standards and teach from a perspective of quality in education to improve the craft of all students toward a journey level certification.

2.3.1 What are the strengths of your program as indicated in the above data?

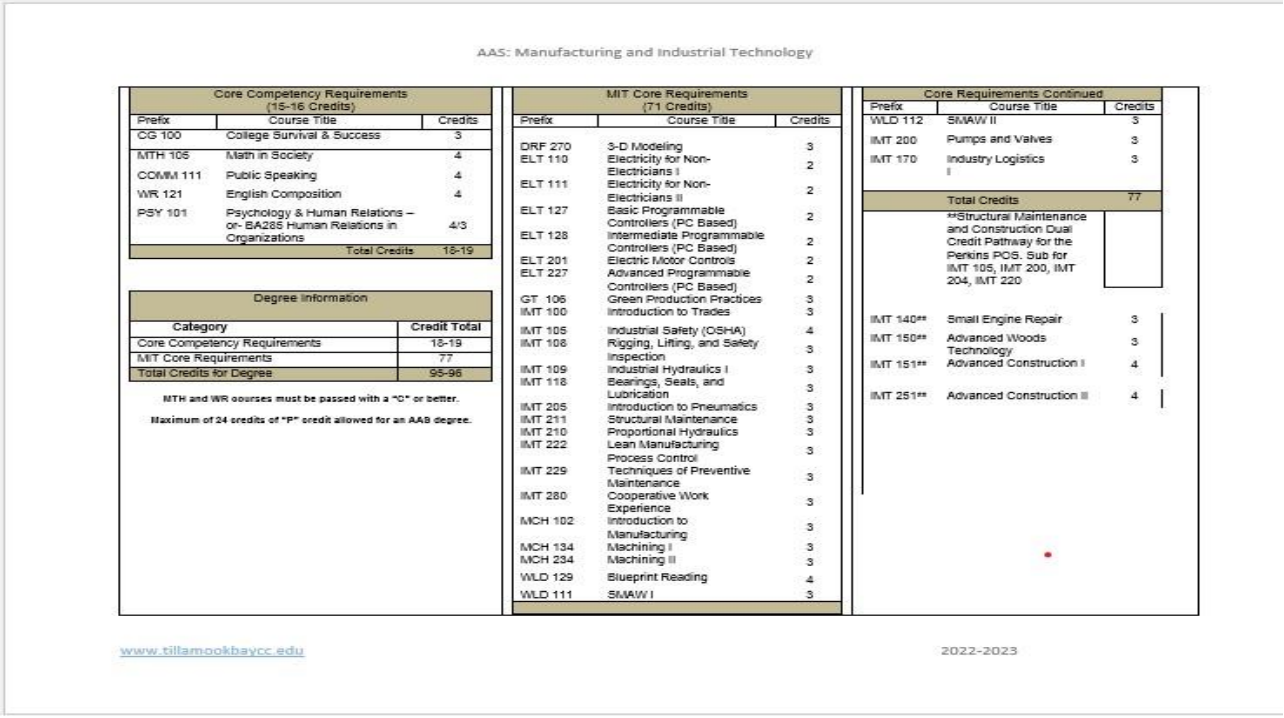
- Student success rates by course are strong.

What are the weaknesses of your program as indicated in the above data?

- In review of the course enrollment for MIT and Welding the data does not give an accurate representation of the MIT and Welding programs.
- While the rise in enrollment numbers is significant it is not indicative of a sustainable MIT degree program but rather programs that are relying on (other programs) potentially apprentices who are enrolled in apprenticeships and are being encouraged to enroll in MIT and Welding because of a lack of degree options that would better suit the apprentices and local industries who are funding these students.

AAS MIT

This well intended degree map is the first step of divergence splitting the path of Apprenticeship and decreasing outcomes both in Apprenticeship Completion and overall graduation rates.



AAS: Manufacturing and Industrial Technology

Core Competency Requirements (15-16 Credits)		
Prefix	Course Title	Credits
CG 100	College Survival & Success	3
MTH 105	Math in Society	4
COMM 111	Public Speaking	4
WR 121	English Composition	4
PSY 101	Psychology & Human Relations – or- BA285 Human Relations in Organizations	4/3
	Total Credits	18-19

Degree Information	
Category	Credit Total
Core Competency Requirements	18-19
MIT Core Requirements	77
Total Credits for Degree	95-96

MTH and WR courses must be passed with a "C" or better.

Maximum of 24 credits of "P" credit allowed for an AAB degree.

MIT Core Requirements (71 Credits)		
Prefix	Course Title	Credits
DRF 270	3-D Modeling	3
ELT 110	Electricity for Non-Electricians I	2
ELT 111	Electricity for Non-Electricians II	2
ELT 127	Basic Programmable Controllers (PC Based)	2
ELT 128	Intermediate Programmable Controllers (PC Based)	2
ELT 201	Electric Motor Controls	2
ELT 227	Advanced Programmable Controllers (PC Based)	2
GT 106	Green Production Practices	3
IMT 100	Introduction to Trades	3
IMT 105	Industrial Safety (OSHA)	4
IMT 108	Rigging, Lifting, and Safety	3
IMT 109	Industrial Hydraulics I	3
IMT 118	Bearings, Seals, and Lubrication	3
IMT 205	Introduction to Pneumatics	3
IMT 211	Structural Maintenance	3
IMT 210	Proportional Hydraulics	3
IMT 222	Lean Manufacturing Process Control	3
IMT 229	Techniques of Preventive Maintenance	3
IMT 280	Cooperative Work Experience	3
MCH 102	Introduction to Manufacturing	3
MCH 134	Machining I	3
MCH 234	Machining II	3
WLD 129	Blueprint Reading	4
WLD 111	SMAW I	3

Core Requirements Continued		
Prefix	Course Title	Credits
WLD 112	SMAW II	3
IMT 200	Pumps and Valves	3
IMT 170	Industry Logistics I	3
	Total Credits	77
	**Structural Maintenance and Construction Dual Credit Pathway for the Perkins POS. Sub for IMT 105, IMT 200, IMT 204, IMT 220	
IMT 140**	Small Engine Repair	3
IMT 150**	Advanced Woods Technology	3
IMT 151**	Advanced Construction I	4
IMT 251**	Advanced Construction II	4

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Degree Map Discrepancies

Actual Minimum Standards per OSHA

Structural Maintenance and Construction

TBCC guarantees, at a minimum, the following courses each quarter for the completion of the Structural Maintenance and Construction Certificate.
A student can transfer in or take other courses that meet the requirements.

	FALL TERM	WINTER TERM	SPRING TERM
Year 1	IMT 105 Industrial Safety (4 CR)	IMT 229 Preventative Maintenance (3 CR)	IMT 211 Structural Maintenance (3 CR)
	WLD 111 SMAW I (3 CR)	WLD 129 Blueprint Reading (4 CR)	IMT 140 Small Engine Repair (3 CR)**
	7 CREDIT TOTAL	*7 CREDIT TOTAL*	*6 CREDIT TOTAL*
Year 2	FALL TERM	WINTER TERM	SPRING TERM
	IMT 150 Advanced Woods Technology (3 CR)**	IMT 151 Advanced Construction I (4 CR)**	IMT 251 Advanced Construction II (4 CR)**
	ELT 110 Electricity for Non-Electricians I (2 CR)	IMT 108 Rigging (3 CR)	
	WLD 261 Fabrication I (4 CR)	ELT 111 Electricity for Non-Electricians II (2 CR)	
	9 CREDIT TOTAL	*9 CREDIT TOTAL*	*4 CREDIT TOTAL*

42 credits ** Dual-Credit Only for Perkins POS

Part Time Students:

Course	Hours
Level 1	
Carpenter I OSHA 30 Orientation to the Trade Building Materials, Fasteners, and Adhesives Hand and Power Tools	50
Carpenter II Introduction to Construction Drawings, Specifications, and Layout Floor Systems	50
Carpenter III Wall Systems Ceiling Joist Roof Framing	60
Level 2	
Carpenter IV Basic Stair Layout Introduction to Building Envelope System Roofing Applications	50
Carpenter V Thermal and Moisture Protection Drywall Installation Doors and Door Hardware Cabinet Installation	55
Carpenter VI Exterior Finishing Cod-Forming Steel Framing	50
Level 3	

Degree Map Discrepancies

MIT: Electrical Emphasis

TBCC guarantees, at a minimum, the following courses each quarter for the completion of the Associate of Science Degree.
A student can transfer in or take other courses that meet the requirements.

Year 1

FALL TERM	WINTER TERM	SPRING TERM
IMT 105 Industrial Safety (4 CR)	IMT 229 Preventative Maintenance (3 CR)	
IMT 100 Exploring Manufacturing and Apprenticeship (3 CR)	WLD 129 Blueprint Reading (4 CR)	
7 CREDIT TOTAL	*7 CREDIT TOTAL*	

Year 2

FALL TERM	WINTER TERM	SPRING TERM
MCH 102 Introduction to Manufacturing (3 CR)	IMT 222 Lean Manufacturing and Process Control (3 CR)	ELT 227 (2 CR) Advanced Programmable Controllers
ELT 110 Electricity for Non-Electricians I (2 CR)	ELT 111 (2 CR) Electricity for Non-Electricians I	
ELT 127 Basic Programmable Controllers (2 CR)	ELT 128 (2 CR) Intermediate Programmable Controllers	
7 CREDIT TOTAL	*7 CREDIT TOTAL*	*2 CREDIT TOTAL*

30 credits

Part Time Students:

YEAR 1	YEAR 2	YEAR 3	YEAR 4

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North Coast Mechanical and Electrical Trades JATC | Inside Electrician | MA# 1244

APPENDIX G: RELATED TRAINING

A minimum of **144** hours of related training shall be required during each year the apprentice is registered in the program. (ORS 660.126 (e) / ORS 660.175(2))

The following is a summary of related instruction including required class hours in each element of instruction. A committee may establish and submit clear objectives and outcomes in lieu of hours for each class subject. (ORS 660.157)

Related training must cover the following subjects and must be completed with a grade of 'C' or better for graded classes or 'Pass' for non-graded classes. (OAR 918-282-0170 to -0365)

Course		Hours
a.	Orientation	3
b.	Basic Electrical Mathematics	60
c.	Safety, accident prevention,	24
d.	First Aid and CPR	16
e.	Care and use of hand tools	3
f.	Care and use of power operated tools	9
g.	Blueprint reading and electrical symbols	30
h.	Introduction to National Electrical Code	30
i.	Electrical fundamentals and basic theory	30
j.	Principles of alternating current	20
k.	Alternating current circuits	20
l.	Portable electric measuring device	9
m.	Principles and circuitry terminations	20
n.	Wiring methods	20
o.	Low voltage circuits	20
p.	Appliances	16
q.	Interior distribution	16
r.	Industrial, commercial and residential calculations	30
s.	Motors and generators	30
t.	Practical circuit sketching	20
u.	Transformers	15
v.	Illumination and design	20
w.	Substations	20
x.	Primary distribution	15
y.	Fundamentals of Electronics	30
z.	Welding and cutting	30
aa.	High voltage circuitry and of direct current	20
	TOTAL	576
A current First Aid Card, including CPR, will be required in addition to the 144 RT hours.		

All Current JATCs Only Require Welding 111 any of the four Apprenticeship Programs

- *Limited Maintenance Electrician Only Requires Welding 111*
- *Inside Electrician Only Requires Welding 111*
- *Inside Plant Electrician Only Requires Welding 111*
- *Inside Maintenance Millwright Only Requires Welding 111*

This table shows the number of enrollments by course*.*

Chart Code

- *Red Courses not needed for related training*
- *Blue : Courses needed for related training in all electrical apprenticeships indicating a shortfall of electrical courses*
- *Pink: Course is part of the MSSC Platform (Currently not relevant to the Related Training)*
- *Grey: Course that is not meeting related training hour requirements*

*** The exception to this is IMT 105 which is highlighted in red because the course description indicates OSHA Training. However, students did not receive an OSHA card during this course invalidating the course outcome. (See 4.2f)*

2018-2019 (n=20 sections)	2019-2020 (n-34 sections)	2020-2021 (n=40 sections)	2021-2022 (n=56 sections)
Summer	Summer	Summer	Summer
ELT 110 210 01	IMT 105 210 01	IMT 118 210 01	** IMT 105 210 01
Fall	WLD 201 210 01	IMT 280 210 01	WLD 120 210 01
ELT 225 210 01	Fall	WLD 113 210 01	WLD 105 210 01
IMT 100 210 01	ELT 110 210 01	WLD 120 210 01	WLD 105 210 02
IMT 102 210 01	IMT 100 210 01	WLD 203 210 01	Fall
IMT 103 210 01	IMT 204 210 01	Fall	ELT 110 210 01
IMT 118 210 01	IMT 280 210 01	ELT 125 210 01	ELT 125 210 01
WLD 102 210 01	MCH 102 210 01	IMT 100 210 01	IMT 100 210 01
Winter	MCH 121 210 02	IMT 102 210 01	** IMT 105 210 01
ELT 125 210 01	MCH 121 210 03	** IMT 105 210 01	IMT 204 210 01
ELT 230 210 01	WLD 111 210 01	IMT 222 210 01	MCH 102 210 01
IMT 102 210 01	WLD 111 210 02	MCH 121 210 01	MCH 121 210 01
IMT 103 210 01	WLD 120 210 01	WLD 111 210 01	WLD 111 210 01
IMT 230 210 01	WLD 172 210 01	WLD 113 210 01	WLD 111 210 02
WLD 111 210 01	WLD 201 210 01	WLD 170 210 01	WLD 120 210 01
WLD 199 210 01	WLD 261 210 01	WLD 201 210 01	WLD 170 210 01

Spring	Winter	WLD 261 210 01	WLD 201 210 01
GT 106 210 01	IMT 104 210 01	Winter	WLD 261 210 01
IMT 106 210 01	IMT 106 210 01	ELT 126 210 01	IMT 140 210 01
IMT 200 210 01	IMT 223 210 01	IMT 103 210 01	IMT 150 210 01
MCH 135 210 01	MCH 220 210 01	IMT 106 210 55	IMT 151 210 01
WLD 112 210 01	MCH 220 210 02	MT 150 210 90	WLD 111 210 03
WLD 199 210 01	WLD 102 210 01	IMT 200 210 01	WLD 261 210 02
	WLD 111 210 01	IMT 230 210 01	Winter
	WLD 111 210 02	MCH 220 210 01	DRF 270 210 01
	WLD 112 210 01	WLD 102 210 01	ELT 126 210 01
	WLD 120 210 01	WLD 112 210 01	IMT 104 210 01
	WLD 202 210 01	WLD 120 210 01	IMT 200 210 01
	Spring	WLD 171 210 01	IMT 222 210 01
	DRF 270 210 01	WLD 202 210 01	WLD 111 210 01
	GT 106 210 01	Spring	WLD 111 210 02
	IMT 103 210 01	ELT 225 210 01	WLD 112 210 01
	IMT 105 210 01	IMT 170 210 01	WLD 120 210 01
	IMT 118 210 01	IMT 211 210 01	WLD 171 210 01
	IMT 200 210 01	IMT 280 210 01	WLD 202 210 01
	IMT 280 210 01	WLD 111 210 02	WLD 261 210 01
	MCH 102 210 01	WLD 111 210 10	WLD 261 210 02
		WLD 113 210 01	ELT 201 230 01
		WLD 120 210 01	WLD 112 210 02
		WLD 172 210 01	WLD 112 210 03
		WLD 203 210 01	WLD 261 210 03
		WLD 262 210 01	Spring
		WLD 280 210 01	ELT 125 210 01
			ELT 225 210 01
			GT 106 210 01
			IMT 118 210 01
			IMT 280 210 01
			WLD 111 210 01
			WLD 113 210 01
			WLD 120 210 01
			WLD 172 210 01
			WLD 203 210 01
			WLD 261 210 01
			WLD 262 210 01
			WLD 280 210 01
			IMT 140 210 01
			WLD 261 210 02
			ELT 202 230 01
			IMT 220 210 01

This table shows the number of enrollments by course.

Chart Code

- *Red Courses not needed for related training*
- *Yellow :Courses not needed for related training*
- *Green: Courses needed for related training*
- *Blue : Courses needed for related training in all electrical apprenticeships indicating a shortfall of electrical courses*
- *Pink: Course is part of the MSSC Platform (Currently not relevant to the Related Training)*
- *Grey: Course that is not meeting Related Training Hour Requirements*

*** The exception to this is IMT 105 which is highlighted in red because the course description indicates OSHA Training. However, students did not receive an OSHA card during this course invalidating the course outcome.*

What are the opportunities for your program as indicated in the above data?

The data is valuable in understanding that our student population in the industrial trades comes from our local industry sectors in addition to guiding where TBCC needs to pivot to gain the most traction to serve the needs of industry and our community as a whole.

The development of Pre-Apprenticeship Programs at both the secondary and adult level will sustain the viability of the program while providing high wage/ high demand jobs in addition to providing multiple entry and exit points.

TBCC will also become a certifying agency through the American Welding Society. This fills a need for our industry partners enabling onsite certification of welders who are immediately needed on the job. This ability also creates an **Enterprise Account** for a future funding stream for the Welding Program.
TBCC also has an opportunity to partner with NW Oregon Works to create a second **Enterprise Account** for a future funding stream that would focus on Aluminum Welding.

What challenges exist for your program based on the above data?

Graduation Rates and Persistence*: The low level of persistence within the MIT is a direct reflection that the program itself is not serving the intended population. The persistence rates of students actually connected to the degree program are lower than persistence rates for transfer degrees.. However, the data is valuable again in showing a need to pivot and re-envision new programs that will serve the needs of all populations and the local industry in Tillamook County**.** Data is missing on apprenticeship completion and needs to be gathered. In order to guide the continuation of all industrial trades programs at TBCC data needs to be collected and reviewed based on apprenticeship completion rates.*
The enrollment numbers (8 students over a 4 year period with a 50% completion rate) for MIT are not an accurate reflection of a sustainable degree program. The degree itself inhibits the graduation rates of the students enrolled in the program. When looking closer at the MIT program the recommended course of action is to bring together industry and create a new degree program that serves our local industry apprenticeship needs while providing students with an opportunity to move laterally in their chosen field or to move upward to a supervisory or management position in local industry.
The MIT and Welding degree programs also create difficulty in determining if the programs reflect the needs of underserved populations such as our Hispanic population (21.4%) because of the current enrollment running concurrently to apprenticeship programs in which underserved populations should be represented in a higher quantity as part of a pathway to a sustainable career through apprenticeship. This data is valuable to TBCC to acknowledge the depth to which these programs and apprenticeships should be marketed for recruitment and retention to truly serve marginalized populations in Tillamook County.

3.0 Student Learning Outcomes Assessment

3.1 How has assessment of course level SLOs led to improvements in student learning and achievement?

Career and Technical Education/Apprenticeship Outcomes- Strengthen both internally and externally the true vision of CTE/Apprenticeship at TBCC while working alongside Tillamook Education Consortium, Industry, Community, local, regional, and state workforce development agencies to create multiple entry and exit points for students to move both laterally and upward in their chosen career path. Align all CTE/Apprenticeship Programming with the K-14 Continuum Model of Tillamook Education Consortium (TEC) including Accelerated Learning to the end goal of a Workforce Development Training and Skills Center Campus.

How has assessment of program-level SLOs led to improvements in transfer or certificate/degree awards?

The majority of the students included in the data were actually serving in apprenticeships, we cannot accurately assess program-level SLOs because apprenticeship has completely different structure defined by BOLI and the individual JATCs.

What challenges remain to make course and program level Student Learning Outcome Assessment more effective for your program?

The separation of apprenticeship and conventional college-bound students will insure that we can more effectively assess outcomes for both sets of student populations.

4.0 Evaluation of Progress Toward Achievement of Previous Program Plans

4.1 Evaluate steps taken to achieve plans established in the last program review.

In the previous program review, 2 major goals were established.

- The implementation of the MSSC (?) Platform.
    - However, while reviewing the platform and the student completion rate of the credentials, we have found that there is a low correlation between student completion and overall graduation rates. The platform itself is valuable, but it does not belong in the MIT degree. Rather, it belongs as an upskill self-contained credentialling platform to be used after graduation or completion of certain, defined apprenticeships. Any other use of the platform is not cost effective and will slow down the completion of apprenticeships, graduation rates, and completion of degrees.

- The implementation of the National Center for Construction Education and Research (NCCER).

    - In March of 2023, TBCC was accredited as an Approved Training Sponsor by NCCER. The decision to move to NCCER was driven by all sectors of industry need. The platform allows TBCC to deliver over 80 craft titles for apprenticeship, pre-apprenticeship, up-skill programs, and hold the potential to develop tailored programming to meet the needs of individual industrial sectors.

- Benefits of Accreditation: NCCER accreditation provides organizations a full workforce development solution – to deliver standardized training and assessment programs for industry-recognized, portable credentials. Accredited organizations must meet and maintain established standards and criteria to ensure integrity in program administration.

    - In the 2023-24 school year, TBCC has granted 45 nationally portable credentials to apprentices and pre-apprentices. This set a precedent in our county and on the Oregon coast. We have industry support to continue to build out the use of the platform in all areas of the trades.

4.2 In cases where resources were allocated toward goals, evaluate the efficacy of that spending.

- As discussed in section 4.1, the MSSC platform is not cost-effective in its current use.
- As discussed in section4.1, the NCCER platform is not only cost-effective, but is highly efficient in delivering content and meeting goals. The use of NCCER has been instrumental in breaking down barriers to meet students where they live, and maintain consistency of content alignment.

5.0 Program Plans

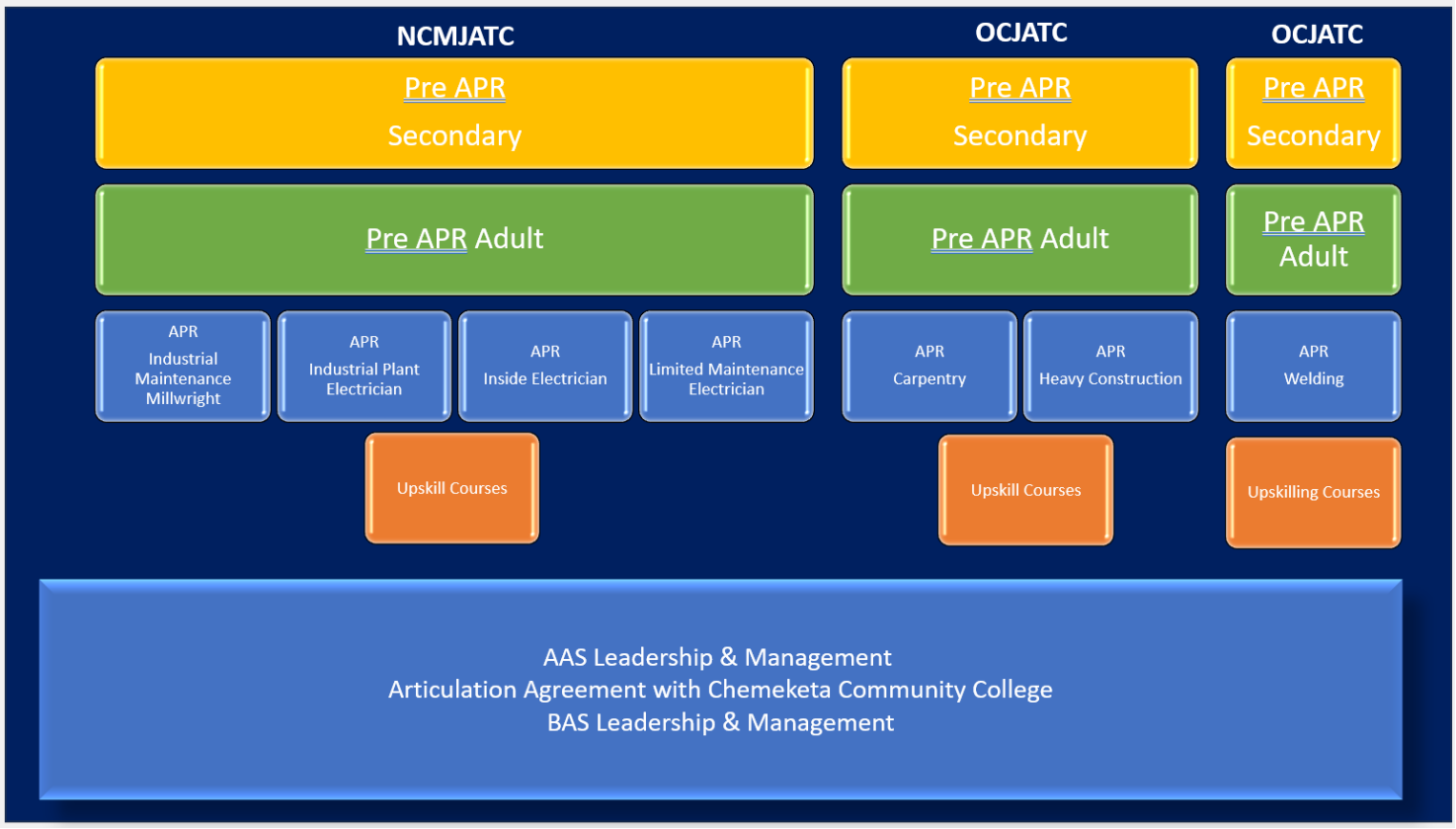
Program Goals (five-year cycle) –

5.1a Implement a new career pathway model that leads students to high wage/ high demand sustainable family living wage jobs with multiple entry and exit points giving students the ability to complete apprenticeship training creating journey level workers and move these workers upward into supervisory, leadership and management positions supporting industry needs through a viable workforce development pipeline.

5.1b Ensure that all courses lead to a nationally portable credential and/or stackable credentials

5.1c *Ensure all Upskill Courses are aligned with Industry and are nationally portable credentials that meet the needs of our student population and industry.*

5.1d Data is missing on apprenticeship completion and needs to be gathered. In order to guide the continuation of all industrial trades programs at TBCC data needs to be collected and reviewed based on apprenticeship completion rates.



Action Plan for 2024-2025

a. Train staff, faculty, and stakeholders both internally and externally on models and platforms that will create sustainable CTE Programs and Apprenticeships.

b. Formalize agreements with TEC, Industry, and other Community Colleges to meet the needs of students and the workforce development pipeline.

c. Create an organizational chart and flow diagram of systems, processes and program supervision moving all activity toward one common goal creating action with purpose.

d. Collaborate with Business Department Chair, Tom Atchison for the development of the AAS in Leadership and Management at TBCC to articulate to the BAS Leadership and Management at Chemeketa Community College.

e. A recommendation to continue the Welding AAS is made with the intent that the program will undergo a significant change over the next five years with three new industry partners within the OCJATC to become the workforce development pipeline for this sector on the Oregon Coast.

f. TBCC will also become a certifying agency through the American Welding Society. This fills a need for our industry partners enabling onsite certification of welders who are

immediately needed on the job. This ability also creates an **Enterprise Account** for a future funding stream for the Welding Program.

6.0 Requests for Resources

- Full-time faculty in the following areas will be crucial to fulfilling the requirements of the JATCs that drive our program successes:
    - Electrical
    - Carpentry
    - Heavy Construction
- Support of infrastructure development

6.1 *Describe the resource request*.

- Administrative assistant
- Operations Manager
- Office space
- Specific advising to CTE students and apprenticeship as requested and mandated by the JATCs
- Marketing resources specific to the department and needs of CTE and apprenticeship
- Critical updates to the web page and navigation for our partners has been requested to and guide apprentices appropriately to the services specific to them, and mandated by the JATCs
- Technical support

6.2 *How does this request further college fulfillment of the college mission and Strategic Priorities?*

Our mission is to serve our community and industry needs, by providing a workforce development pipeline that creates sustainable high-wage, high-demand jobs to break the cycle of generational poverty.

7.0 Advisory Committee and Employer Input (CTE Programs Only):

There have been mandated votes by the JATCs and industry partners outlining the need to move the apprenticeship and pre-apprenticeship programs under a separate division to meet the unique and specific rules, regulations, and compliance requirements mandated by BOLI and the individual JATCs we serve. (Additional documentation can be provided upon request)

8.0 High School, Community, and Employer Outreach

These actions have been documented through the Tillamook Education Consortium in detail by aligning Career and Technical Education throughout the county and Oregon coast region with the collaboration and support of more than 120 key partners from community, industry and educational leadership. Documentation can be provided upon request.

9.0 Executive Summary

While the rise in enrollment numbers is significant it is not indicative of a sustainable MIT or Welding degree program but rather programs that are relying on (other) potential apprentices who are enrolled in other programs and are being encouraged to enroll in MIT and Welding because of a lack of degree options that would better suit the apprentices and local industries who are funding these students.

The enrollment numbers do suggest that our Welding program is engaging and perhaps if marketed to the correct student population would be sustainable on its own if partnerships with local industry can be added to support high wage/high demand jobs to future graduates.

The enrollment numbers (8 students over a 4 year period with a 50% completion rate) for MIT do not indicate a sustainable degree program. The degree itself inhibits the graduation rates of the students enrolled in the program. When looking closer at the MIT program the recommended course of action is to bring together industry and create a new degree program that serves our local industry apprenticeship needs while providing students with an opportunity to move laterally in their chosen field or to move upward to a supervisory or management position in local industry.

The MIT and Welding degree programs also create difficulty in determining if the programs reflect the needs of underserved populations such as our Hispanic population (21.4%) because of the current enrollment running concurrently to apprenticeship programs in which underserved populations should be represented in a higher quantity as part of a pathway to a sustainable career through apprenticeship.

This data is valuable to TBCC to acknowledge the depth to which these programs and apprenticeships should be marketed for recruitment and retention to truly serve marginalized populations in Tillamook County.

The MIT and Welding degree programs course passing rates indicate that our full time and adjunct faculty are dedicated to student success and positive outcomes for the students who are participating in the programs.

The data is valuable in understanding that our student population in the industrial trades comes from our local industry sectors in addition to guiding where TBCC needs to pivot to gain the most traction to serve the needs of industry and our community as a whole.

The low level of persistence within the MIT and Welding Program is a direct reflection that the program itself is not serving the intended population. The persistence rates of students actually connected to the degree program are lower than those of transfer students. However, the date is valuable again in showing a need to pivot to and to create new degree programs that will serve the needs of all populations and the local industry in Tillamook County.

Graduation rates for the Welding and MIT program are also cause for concern. Over the past 4 years the MIT program has seen 4 students graduate. Again, leading back to the conclusion the program is not serving our student population or local industry needs.

Graduation rates for Welding are excluded in the data. However, a direct correlation to the number of students who are listed as “other” could be aligned with students enrolled in apprenticeship programs which do not need the significant amount of welding courses. This may indicate a very low percentage of any of the student population enrolled in the Welding program would graduate with a degree in Welding.

Data is missing on apprenticeship completion and needs to be gathered. In order to guide the

continuation of all industrial trades programs at TBCC data needs to be collected and reviewed based on apprenticeship completion rates.

CLOSING STATEMENTS

In light of the misrepresentation of the student population in the data, a recommendation can't be made in favor of the MIT degree remaining as a viable program at TBCC. It is recommended that a degree that serves the apprentices of our local industry be created and aligned to multiple industry needs that are high wage and high demand in Tillamook County.

Although the data in Welding is also misrepresented by the inflated rate of students who are serving in an apprenticeship, the amount of student interest, success, growth and completion of courses is significant. In addition to the growth and expansion of the OC JATC, we now are the related training provider to Bergerson Construction, whose area of focus is heavy construction as well as two additional companies that will soon be joining the OCJATC. The addition of Heavy Construction creates a workforce development pipeline to anchor the Welding Program through Apprenticeship and Pre-Apprenticeship programs across the county.

A recommendation to continue the Welding program is made with the intent that the program will undergo a significant change over the next five years with industry partners and the development of Pre-Apprenticeship which will sustain the viability of the program while providing high wage/ high demand jobs.

It is recommended that a review of the way apprenticeship students are advised needs to be implemented immediately to discontinue the funding of welding courses that are not a part of apprenticeship to save local industry expenditures and apprentices who are potentially being delayed in completing a registered apprenticeship.

It is further recommended that funding for MIT be reviewed and immediately be redirected to serve the needs of creating new sustainable programs as the related training provider that serves the two JATC's whose apprentices have and will be completing apprenticeships as well as the new pre-apprenticeship programs that receive accelerated learning credit in Tillamook County.

10.0 Vice President of Instruction Program Review Summary Page

I would like to thank the faculty and staff below for their good work in putting this program review together. I wish to thank Sherry Cook, Carey Rausch, Ron Carlbom, and Randall Tyle.

The enrollment numbers for Welding suggest that the Program is engaging and meeting the needs of our students and the local community. The data suggests that the amount of student interest, success, completion, and interest is significant.

The Manufacturing and Industrial Technology Program clearly needs attention in the coming year. The enrollment numbers are not an accurate reflection of a sustainable degree program. However, given the number of changes that the College is undergoing, I think the next year will provide a time to reset such a Program. There has been significant turnover in College leadership in the last year, and we are also undergoing significant changes in our Apprenticeship Programs. I am looking forward to working with the President and the Executive Director of Workforce

Development and Dean of Career-Technical Education to thorough review and improve both the Manufacturing and Industrial Technology Program, but also the Apprenticeship Program.