



Academic Program Review

Program Name: Industrial Process Operator - Associate of Applied Science

Academic Year 2025/2026

Recent Recommendations

Using your most recent review, please respond to all feedback and recommendations.

Response:

We are in the process of differentiating the industrial process operator (process technology) and instrumentation by expanding the instrumentation certification by adding in an automation section as per the request of industry. Although there is much overlap between the industrial process operator A.A.S. degree and the instrumentation certification, this will add 10 additional credits to the certification. This process has been submitted for a major program change and is anticipated to be part of the program starting fall 2026.

Student Learning Outcomes

Describe the assessment of your student learning outcomes (SLOs). Discuss your findings, changes you are making, and what you hope to see as a result.

Response:

No changes have been made to the SLOA since it was last completed. The outcomes have improved over the last several years with increased enrollment as well as a high graduation rate each year. Due to staffing changes the SLOA did not undergo any changes. The program has a new program coordinator and will look closely at the existing SLOA and will look at what changes can be implemented or suggested for the next SLOA.

Did you make any curricular changes based on your most recent SLOA? If so, discuss what changes were made. If no changes were made, please discuss the strengths of your curriculum based on the assessment of your outcomes.

Response:

No changes were made based off the feedback dated 2 June 2021. This discussed the student Piping and Instrumentation Drawings (P&ID's) and what a powerful tool it has been for the students going into the process industries. We have taken this concept and expanded it into cards with P&ID symbols that the students use as a group to create a tabletop P&ID of a system that they can see. This has led to critical thinking skills, reasoning and discussion among the students. These skills allow the student to be "job ready" when they arrive for an internship or employment. Industry and student feedback has told us that the first thing after completing safety and orientation, they are given a clipboard and told to draw a P&ID of various systems as one of their first tasks. Our students are excelling at this and the feedback that has been received from industry has been positive.

As of 2017, all Baccalaureate programs are required to embed communication outcomes within their SLOA Plans. This is optional for non-Baccalaureate programs.

Communication outcomes in the SLOA plan are: Select

Check the checkbox to certify completion of the following tasks:

- ☒ Upload supporting documents to the Supporting Documents folder. This includes artifacts, rubrics, and other documents related to your SLOA.
- ☒ Upload your most recent SLOA to the Supporting Documents folder, even if no changes have been made since the last review.

Have changes been made to your SLOA document since your last review? No

If so, please summarize what changes were made.

Response:

NA

High Impact Practices

Please indicate which high impact practices are currently being implemented in relation to the program's student learning outcomes.

- | | |
|--|--|
| ☒ Capstone Courses & Projects | ☐ Graduate Level Research |
| ☒ Collaborative Assignments & Projects | ☐ Writing-Intensive Courses |
| ☐ Diversity/Global Learning | ☐ Publications |
| ☐ ePortfolios | ☐ Communications |
| ☐ First-Year Seminars and Experiences | ☐ Scholarly Activities |
| ☒ Internships | ☐ Studios |
| ☐ Service or Community-Based Learning | ☐ Practicum |
| ☐ Undergraduate Research | ☐ Other |
| ☒ Labs | ☐ None of these |

Discuss how the HIPs in the program are reflected in the SLOA. If you have identified HIPs that are not included in the SLOA, please consider an update.

Response:

The students are being prepared for industry jobs. They learn about the various pieces of process equipment, they are operating this equipment in various labs and hands-on settings, under numerous conditions in order to expose them to as many operating scenarios as possible. The labs and the capstone projects all tie in together for the students. From understanding a basic P&ID drawing to writing a start-up procedure for the plant, testing and revising it to actual operations, troubleshooting and maintenance of the unit. All this cumulates from three and a half semesters of hands-on and classroom learning. The students also work collaboratively on various procedures, including a plant start-up procedure, operating procedures and a plant shutdown procedure. These are tested real time on an operational system, adjusted as needed, retested until it works. Many of the students have the opportunity to apply for an internship with one of our many industry partners. These are competitive scholarships that allow the students to experience life on the slope or other locations depending on the industry partner. This is normally done over the summer utilizing a two week on, two week off schedule. On occasion a student will be offered full time employment during this internship. When the students complete these High Impact Practices, they are job ready.

Student Success

Please reference the [Resources tab](#) for information on accessing the Student Success Data Dashboard and contacting your designated data liaisons.

Student Success Data Trends

Persistence: **No Change**

Pass Rates: **No Change**

Student Credit Hours: **Increase**

Majors: **Increase**

Degrees Awarded: **Increase**

Other Trends (if applicable):

Spring high school PRT 101 class. Offered to local high school and statewide homeschool students. Class is in person and also available via Zoom. This class, an introductory class, has had a high retention rate for the process technology program. See attached.

Achievement Disparities

Discuss any achievement disparities identified in your disaggregated student success data and explain how you plan to address them.

Response:

No disparities were noted in the student success data.

Closing the Loop

Please discuss how your student learning outcomes are reflected in high impact practices and student success data.

Response:

The high impact practices allow the students to become familiar with the many hands on activities that are part of the program. Many of these hands on items were donations by our industry partners. This helps ensure the students are learning on the proper pieces of equipment, techniques, safety, procedures and operations. The labs lead up to the capstone project, which is a cumulation of everything they have learned on a real life, real time operational plant with a control room.

Academic Program Profile

The following questions help show how your program supports the university's mission, connects with other UA programs, engages with the community, contributes through service courses, and supports student success after graduation. Please use this section to highlight the value your program brings to students, the university, and beyond.

UAF's Mission:

The University of Alaska Fairbanks is a Land, Sea, and Space Grant university and an international center for research, education, and the arts, emphasizing the circumpolar North and its diverse peoples. UAF integrates teaching, research, and public service as it educates students for active citizenship and prepares them for lifelong learning and careers.

In what ways does your program advance UAF's mission?

Response:

The Process Technology program allows the student the opportunity to potentially get an internship between the first and second year of classes. They shadow, learn, assist and in many ways are part of the company during their internship. Our UAF/CTC process technology students have occasionally been hired upon completion of their internship, with one of the stipulations being that they need to complete their Process Technology A.A.S. degree. One of the goals of the program is to help the student become "job ready".

How is your program related to others in the UA system?

Response:

KPC has a similar program. The biggest difference is that their program is online with an intensive hands-on at the end of the semester. UAF/CTC process tech program is an in person program with hands-on training as we progress through the semester. Talking with our industry partners, they would much rather see a consistent opportunity to have hands-on as they are learning various concepts and fundamentals. We consistently get positive feedback from industry regarding the practices that we utilize.

Who are your key community or external partners?

Response:

Key partners for the industrial process operator A.A.S. degree program are ConocoPhillips, Hilcorp, and Alyeska. There are many more partners that we work with as well including Santos, GVEA, Petros tar, and the UAF Powerplant

What role do your services courses play, if any?

Response:

Our services - the education, training and hands-on experience makes every one of our graduates industry job ready. The knowledge gain is, on average saving industry [REDACTED] in training costs, allowing the new employee who completed the process technology program to start actually working months sooner than an untrained hire. The safety training, equipment experience and knowledge as well as the principles of operation make our graduates highly desired by industry.

They are hired in the process industries, either during their internship between their first and second year or after graduation. The amount of potential income for the process technology students makes their degree program one of the highest paid associate degree programs not only in Alaska but in the United States.

Submitter and Collaborator Names:

David Fonger

Submitter Email:

drfonger@alaska.edu

Committee Review

Program Name: Industrial Process Operator – Associate of Applied Science

Academic Year 2025/2026

Overall Recommendations

The college or school committees set the tone for helping each program feel seen during this process. We have provided you with feedback tags to attach to this program review. Please select as many as applicable.

- | | |
|--|--|
| ☒ Insufficient Narratives | ☒ Report Incomplete |
| ☐ Address Achievement Gap | ☐ Consider Curricular Revisions |
| ☐ Develop Online Offerings/ | ☐ Improve Time to Degree |
| ☐ Options Increase Enrollment | ☐ Increase Graduates |
| ☐ Increase Retention/Persistence | ☐ Strengthen Advising Practices |
| ☐ May be asked to share Effective Practices | ☐ Recommendation to University-Wide Committee |

Explanation of Overall Recommendations

Response:

The report highlights HIPs (capstone course, labs, internships) provide students with hands-on experience in the field to be prepared to work after graduation. However, supporting documents do not clearly show this narrative and how those HIPs have helped the program growing and the increasing graduates' rate.

Student Learning Outcomes Feedback

- | | |
|---|--|
| ☐ Strong | ☐ Developing Requires |
| ☒ Requires Minor Revision | ☐ Major Revision |

Student Learning Outcomes Assessment Feedback

- | | |
|--|--|
| ☐ Strong Alignment with SLOA Plan | ☐ Clear, Concise Presentation of Findings |
| ☐ Compelling Learning Story | ☒ Missing a Direct Measure Missing |
| ☐ Missing Active Verbs | ☐ Curricular Connection |
| ☐ Missing Collaboration within Department | |

SLOA Feedback Narrative:

The program highlights a learning tool, "Piping and Instrumentation Drawings (P&ID's), and it has helped students to enhance critical skills and reasoning. According to students' feedback, they were able to complete safety and orientation when they started an internship and/or employment because of the hands-on training. It sounds like a positive outcome from the previous SLOAs. However, it was not clear the rate and details of the student learning outcomes and how it was measured throughout the students. There is no evidence of department collaboration; however, this program has several key industrial partners, such as Conoco Phillips, Hilcorp, and Alyeska, who donated hands-on items.

Student Success and Equity Feedback

Narrative:

I do not see information listed to be able to answer the guiding questions. No equity gaps noted, no strategies noted for retention/graduation. The only inclusive practice noted was that this class is intended and targeted for high school and home school students.

High Impact Practices Feedback

Narrative:

The HIPs were clearly defined. It would appear that they are engaging in meaningful experiences based on the information provided.

Profile Feedback

- | | |
|---|---|
| ☒ Mission-Centric to College and/or UAF | ☐ Unique within UA |
| ☐ Collaborativewith other UA Programs | ☐ Provides Job Placement for Graduates |
| ☐ Strong Post-Grad Success for Students | ☐ Strong Service Teaching Component |
| ☒ Strong Ties to Community or Industry | |

Financial Feedback

- | | |
|--|--|
| ☐ High Tuition Revenues | ☐ High Grant Revenues |
| ☐ Operates at Low Cost | ☒ Productive Faculty |
| ☐ Opportunities to Increase Revenue | ☐ Low Enrollment |

Reviewer Names:

Jackie Hatley, Yoko Kugo, Laurel Keyer

Dean Review

Program Name: Industrial Process Operator – Associate of Applied Science

Academic Year 2025/2026

Dean Feedback

Overall feedback narrative:

. This program is seeing a resurgence in enrollment thanks to the sole faculty member's on-going connections to industry and above-and-beyond service to CTC. Critical to Alaska's oil and gas industry, this degree also serves powerplant operators, coal plant workers etc. CTC is in the process of filling a years-long empty faculty position to better resource this critical program area.

Recommendation to University-Wide Committee

Vice Provost Review

Program Name: Industrial Process Operator – Associate of Applied Science

Academic Year 2025/2026

Vice Provost Feedback

Overall feedback narrative:

The reviews for the Instrumentation Technology Certificate and Industrial Process Operator AAS are nearly identical to the 2023 mid-cycle review because recommended revisions have not yet been implemented. The most critical need is to differentiate the SLOs between the two programs; otherwise, they appear redundant. The program provided five primary SLOs and two secondary outcomes, most of which are fine as written, though one is a program-level outcome rather than a true SLO. Assessment procedures and artifacts were included, which is good, but the program needs to provide data and narrative analysis showing whether students are meeting the SLOs. For the 2027 mid-cycle review, the program must revise the SLOA and SLOs, include evidence of assessment results, and document curricular changes and their impact. Differentiation between the certificate and AAS remains essential, and all materials should reflect the updated program name. Closing the loop with evidence-based improvements should also be clearly demonstrated.

The program reports positive trends, including increases in student credit hours, majors, and degrees awarded, along with stable persistence and pass rates. Retention in PRT 101 is strong, and the course serves as an access point for high school and homeschool students. Hands-on learning through labs and internships ensures graduates are job-ready, and many secure employment during or immediately after internships. For future reviews, longitudinal data on persistence, pass rates, and graduation should be included, along with subgroup analysis to identify equity gaps. Strategies for supporting struggling students—such as advising, mentoring, or targeted interventions—would strengthen the program's approach to student success.

High-Impact Practices are present and align with program goals, but the report would benefit from more detail on when and where students engage in these practices, such as specific courses or fieldwork. Including evidence and examples will help demonstrate the depth and impact of HIP integration.



Department Profile and Financial Data

Department Name: **Process Technology**

Last updated: 2025/2026

Department Profile and Financial Data

This section aligns with Board of Regents Policy 10.06 and supports systemwide consistency in academic program review. Responses are maintained across review cycles and may not need to be updated annually. Please review your previous answers and update only if necessary.

When answering the following questions, refer exclusively to the standardized Financial Data Template provided by UAF. Work with your data liaison to interpret the template accurately. Do not include any additional or alternative data — consistency across programs is essential. To maintain integrity and standardization across all of UAF it is very important that you do not provide any additional or alternative data from this template.

Confirmation of Review

Have you reviewed the information in this section and made any necessary updates? **Yes**

Financial Data Spreadsheet

☒ I have reviewed the Financial Template for updates and accuracy.

Cost Effectiveness

Please describe strategies such as instructional efficiency, shared resources, cross-listed courses, or other ways your department uses resources thoughtfully.

Response:

Courses between Industrial Process Operator (Process Technology) and Instrumentation have the same GER's as well as many of the PRT classes are cross listed.

Associated Programs

Program Name	Degree Type
Instrumentation Technology	Certification
Mining Mill Operations	OEC

Collaborator Name(s):

David Fonger M.Ed

Collaborator Email(s):

drfonger@alaska.edu



Financial Data

Department Name: **Process Technology**

Academic Year 2025/2026

	FY2023	FY2024	FY2025	For Data Entry Staff	For Programs and Review Committees
Total Student Credit Hours (SCH)	454	571	585	Provided in SCH tab in the student success data provided by PAIR.	
Service SCH				Sum rows labeled as "In unit, outside department, Service" and "Outside unit, Service" in the SCH tab of the data provided by PAIR.	
Department FTEs	2.15833333	1.84166667	1.24166667	FTE = Full-time equivalent employee. This field will auto-populate from the FTE Worksheet below.	
Total SCH per Department FTE	210.35	310.05	471.14		
Service SCH per Department FTE	0.00	0.00	0.00		

Majors in Programs	48	47	50	Sum for all programs from the Majors Total tab in the data provided by PAIR.	
Department FTE's	2.15833333	1.84166667	1.24166667	This field will auto-populate from the FTE Worksheet below.	
Majors per Department FTE	22.24	25.52	40.27		

Total Unrestricted Expenditures				Total Expenditures made from budgets with an F1 or F7 fund type designation, from provided cycle report data filtered by Data Liaison	
Total Restricted Expenditures				Total Expenditures made from budgets with revenue of the F2 or S2 fund type designation, from provided cycle report data filtered by Data Liaison	
Total Unit/Central Support Allocated to Program(s)				Expenses incurred for direct support of instruction within orgs identified as central or academic support, if applicable	
Total Expenditures					

Tuition Revenue				Receipts to college from tuition generated by the department/program (F1). NOTE: under the current 80/20 percent tuition distribution model generating units receive 80%. PLEASE USE PAIR REPORTED SCH.	Receipts to college from tuition generated by the department/program, based on the campus's active tuition distribution model, which determines how much the unit receives of their generated tuition, and how much the campus keeps (in addition to the out-of-state surcharges) to support central offices/functions. The current distribution model is 80/20, where the unit/college receives 80% of their generated in-state tuition.
State Appropriation Revenue				Appropriations for current funds operation of the university from the general fund of the State of Alaska through the annual budget cycle. This category also includes TVEP and State Mental Health Trust funds, if allocated to the department. (F1)	Appropriations for current funds operation of the university from the general fund of the State of Alaska through the annual budget cycle.
Restricted/Sponsored Project Revenue				Revenue from external sponsors; includes grants, contracts, sponsored projects & restricted (grant) accounts funded by UA Foundation funds (F2/S2)	Revenue from external sponsors; includes grants, contracts, sponsored projects & restricted (grant) accounts funded by UA Foundation funds
Fees				Course Fees (9159)	
Other UA Receipts/Revenue				e.g. Performance and Sales Receipts, Space Rental Revenue, Indirect Cost Recovery (F1/F7); NOTE: COURSE FEES (9159) REPORTED ABOVE	
Total Revenue					

Workload Allocation	FY2023	FY2024	FY2025	
Teaching Units	45	43	25	Department faculty's workload units assigned to teaching
Service Units	12	12	6	Department faculty's workload units assigned to service
Research Units	0	0	0	Department faculty's workload units assigned to research

Full-Time Equivalent Worksheet*	FY2023	FY2024	FY2025	
Faculty FTEs	1.5	1.5	0.75	Base assumption: 12-month full-time = 1.0 FTE. 9-month = 0.75 FTE. Split appointments are multiplied by the % of effort assigned to this department. Part-time are multiplied by the % of effort assigned. F9 faculty on sabbatical count as 67% of one 9-month 0.75 FTE (or 0.50 FTE).
Adjunct FTEs	0.325	0.175	0.325	Base assumption: 40 units/credits = 1.0 FTE. Total # of credits taught by adjuncts in a year divided by 40 = the FTE of adjuncts in that year.
Staff FTEs	0.33	0.17	0.17	Base assumption: 12-month full-time = 1.0 FTE. 9-month = 0.75 FTE. Split appointments are multiplied by the % of effort assigned to this department. Part-time are multiplied by the % of effort.
Graduate TA/RA FTEs	0	0	0	Base assumption: 40 hours/week for 12 months = 1.0 FTE. 9-month = 0.75 FTE.
Total Department FTEs	2.15833333	1.84166667	1.24166667	Sum of all employee FTEs

*Note: FTE definitions and calculations for the purpose of Academic Program Review are different than for other institutional reporting processes (e.g. OMB or IPEDS reporting)

Information last updated by: Sheena Tanner / Martha Westphal

Date: 9/18/25