Peralta Community College District

Berkeley City College
College of Alameda
Laney College
Merritt College

Career Technical Education (CTE) Program Review Handbook

Fall 2015
Version 3.

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Purpose and Goals

The information gathered during the program review process provides the basis for informed decision making in the Peralta Community College District. Comprehensive Instructional Program Review is a systematic process for the collection, analysis, and interpretation of data concerning a program or department and its curriculum. It provides program and/or departmental accountability by collecting, analyzing and disseminating information that will inform integrated planning, resource allocation, and decision-making processes.

The primary goals are to:

- Ensure quality and excellence of academic programs.

- Provide a standardized methodology for review of instructional areas.

- Provide a mechanism for demonstrating continuous quality improvement, producing a foundation for action.

- Identify effective and exemplary practices.

- Strengthen planning and decision-making based upon current data.

- Identify resource needs.

- Develop recommendations and strategies concerning future directions and provide evidence supporting plans for the future, within the department, at the college and at the District level.

- Inform integrated planning at all levels within the College and the District.

- Ensure that educational programs reflect student needs, encourage student success, and foster improved teaching and learning.

- Provide a baseline document for demonstration of continuous improvement and use as a reference for future annual program updates.

Components in the Process

The CTE Program Review process, which occurs every three years, consists of answering a set of questions designed to aid in the examination of a discipline, department or program. These questions direct faculty to examine the curriculum, pedagogy, assessment results, and resource areas related to student success and to analyze findings in order to develop a plan that will improve the quality of teaching and learning.

The primary components in the CTE Program Review process include:

- The CTE Program Review Team

- Core data elements

- Completion of a CTE Program Review Narrative Report every three years

- Validation of the CTE Program Review Report

- Completion of three reporting templates (found in the appendix). They are:

    - The CTE *Program Review Resource Requests Template* in which to summarize key resource needs.

    - The *Integrated Goal Setting Template* in which to set goals, objectives and action plans based upon the Comprehensive Instructional Program Review findings in alignment with PCCD Strategic Goals and Institutional Objectives.

    - The *Validation Process Form* in which to document the validity of the program review.

- Annual Program Updates (APUs), which review progress in meeting goals identified in the CTE Program Review, are completed in the alternate years within the CTE Program Review three year-cycle.

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Thus, the recommendations and priorities from the CTE Program Review feed directly into the development of departmental and/or unit plans. In turn, the departmental and/or unit plans serve as the driving mechanisms in formulation of updated educational, budget, technology and facilities plans.

The CTE Program Review Team

Each discipline, department or program at the college will assemble a Comprehensive Instructional Program Review Team at the College that is comprised of the following members:

- Department Chair, Program Coordinator, or discipline designee.

- Division Dean

- Two additional faculty members, if applicable.

- All faculty members within a department are encouraged to participate in the comprehensive Instructional Program Review process, although participation is not mandatory.

- A college body, such as a validation committee or institutional effectiveness committee, comprised of faculty outside of the discipline, department or program.

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The CTE Program Review Team will analyze the core data elements, course outlines, SLO assessment results, and complete the CTE Program Review Narrative Report.

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Validation: A designated college body, such as a validation committee or institutional effectiveness committee, will review the CTE Program Review Narrative Report to ensure completeness of the narrative report, the resource needs template, and the goal setting template.

The validation committee will complete the validation form, including signatures, included in Appendix C and make recommendations to the Vice President of Instruction.

CTE Core Data Elements

Part I. District Office

The *District Office of Institutional Research* will provide the following data to the College discipline, department or program by October 1st of each comprehensive program review year.

- Total enrollment data for each discipline, department or program (unduplicated) for the last three years disaggregated by age, gender, ethnicity and special populations.

- Enrollment data for individual courses, by time of day, fall, spring and summer sessions, for the last three years.

- FTES per FTEF (productivity) by course and discipline, department or program for the last three years.

- College productivity rate for the last three years.

- Productivity for comparable CTE departments for the last three years.

- Degrees and certificates awarded, by discipline, department or program disaggregated by age, sex and ethnicity for the last three years.

- Total degrees and certificates awarded by the college, per year, for the last three years.

- Retention rates by course and discipline, department or program for the last three years.

- Overall college retention rate.

- Retention rates for comparable CTE departments for the last three years.

- Course completion (student success) rates, by course and discipline, department or program for the last three years.

- College course completion rates for the last three years

- Faculty Demographics: Full-time/part-time, age, gender, ethnicity

- Labor Market Information and Trends:

  - Data by O*NET classification (from Career Zone California) on new and replacement job projections and wages
  - Data/Reports from Centers of Excellence (COE) on industry sectors
  - EMSI data or other sources of EDD data

Part II. College

A. The *Office of Instruction and/or the Curriculum Specialist* at the College will provide the following to each discipline, department or program.

- A list of active courses in the discipline, department or program and the date they were last updated/approved.
- A list of degrees and certificates

B. The *Office of Instruction and/or SLO Coordinators* at the College will provide the following to each discipline, department or program.

- A list of courses and programs that depicts the current status of assessments at the course and program levels.

C. The *Office of Instruction* at the College will provide the following to each discipline, department or program.

- A copy of the PCCD Strategic Goals and Institutional Objectives for the current academic year.
- A copy of the College Goals and Objectives for the current academic year.

Definitions

Discipline: An individual area of study within a department/program. Each discipline consists of all the courses in the Master Course file that make of the discipline. This is the baseline level of instruction and is linked to a Taxonomy of Programs (TOP) code. TOP is a classification system for academic programs in the California Community Colleges.

Department/Program: An organized sequence of courses, or series of interdisciplinary courses, leading to a defined objective, a degree, a certificate, a diploma, a license, or transfer to an institution of higher education (Title 5 Section 55000).

FTEF (Full Time Equivalent Faculty): Also known as load equivalency. A full-time instructor teaching 15 lecture hours per week for one semester = 1.0 FTEF. One lecture hour = 50 minute instructional period. One lab hour = .8 of one lecture hour equivalent. This is a semester, or term, measure.

FTES (Full Time Equivalent Student): This measure is used as the basis for computation of state support for California Community Colleges. For example, one student attending 15 hours a week for 35 weeks (one academic year) generates 1 FTES.

WSCH: Weekly Student Contact Hours. For a particular class, Weekly Contact Hours = number of class hours per week, and WSCH for the class = total number of weekly contact hours for all students in the class as of census date.

To compute the FTES generated by a 17.5 week semester class use the formula:

$$FTES = WSCH \times 17.5 / 525$$

For example, a class of 40 students meeting 3 hours per week generates 120 WSCH, and so

$$FTES = 120 \times 17.5 / 525 = 4.0$$

FTES/FTEF (Productivity): The ratio of full-time equivalent students to full-time equivalent instructors. This is a measure of class size and will differ across disciplines and types of classes. For lecture classes, Productivity = enrollment/2. For example, if there are 35 students in a lecture class, productivity = 35/2 = 17.5.

Retention: The percent of students earning any grade but "W" in a course or series of courses. To compute retention for a class, take class completion with grade other than "W" and divide by enrollment at census. Grade other than W = A, B, C, D, F, I, Pass, No Pass, In Progress, Report Delayed, No Grade

Student Success: Course completion rate with a grade "C" or better.

The CTE Program Review Report

1. **College: Laney College**

   Discipline, Department or Program: Machine Technology

   Date:October 26, 2015

   Members of the Comprehensive Instructional Program Review Team: Louis Quindlen, Peter Brown

   Members of the Validation Team:

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2. **Narrative Description of the Discipline, Department or Program**:

Please provide a mission statement or a brief general statement of the primary goals and objectives of the discipline, department or program. Include any unique characteristics, degrees and certificates the program or department currently offers, concerns or trends affecting the discipline, department or program, and a description of how the discipline, department or program aligns with the college mission statement.

The Laney Machine Technology program is designed both for entry-level students and experienced craftspeople wanting to upgrade their skills in machining or industrial maintenance. The up-to-date curriculum provides the current theoretical, technological and practical experience necessary for employment and advancement in the industry, and features the following elements:
- Theory and design of machine tools and machinery
- Properties of materials, including heat-treating
- Laboratory courses focused on hands-on operation of machine tools
- Technical mathematics
- Precision measurement and layout and inspection
- Blueprint reading, geometric dimensioning and tolerancing,
- 3-D solid modeling and simulation (SolidWorks)
- CNC setup, operation and programming, and CAD/CAM programming
- Project planning and execution
- Repair of industrial equipment including machining, welding, and electrical repairs.
- Operation and troubleshooting hydraulic and pneumatic systems.

The program prepares students for employment as:
- Machinist
- Machine Tool Operator
- CNC–CAD/CAM Programmer
- Industrial Maintenance Machinist
- Parts Inspector

The department offers the following degrees and certificates:
- A.S. Machine Technology (60 units)
- C.A. Machine Technology (37 units)
- C.A. Industrial Maintenance (29.5 units)

Machine Technology is also in the development stages for certificates in:
- Advanced Industrial Maintenance (planned 22 units)
- QC inspection (planned 20 units)

We are currently focused on implementing the National Institute of Metalworking Skills (NIMS) credentialing system in our shop and have been accredited by NIMS. The NIMS Accreditation Team, comprised of a NIMS Board member and local Machine Technology faculty from De Anza College, spent three days evaluating our curriculum, equipment and tooling, and facilities. They interviewed students, faculty, members of our Advisory Boards and the Laney President. Based on their report Laney Machine Technology has received NIMS Accreditation through April 2019.

The department is committed to rebuilding machinist apprenticeship in the Bay Area and is working with the International Association of Machinist, California Tooling and Machining Apprenticeship Association, California Division of Apprenticeship Standards, Bay Area Deputy Sector Navigator for Advanced Manufacturing, and Co0mmunity College Chancellor's Office to rebuild machinist apprenticeship. The department currently has three apprentices enrolled in our classes.

The Laney Machine Technology program is positioned to address the current shortage of manufacturing and maintenance machinists in the East Bay. The shortage is due to an aging workforce and a new emphasis on manufacturing innovation in the East Bay. Our vision to address the shortage emphasizes the strongly contextualized model of the Career Advancement Academies. This enables our program not only to train students that are currently prepared for this highly technical field, but to provide opportunity to students that are not currently prepared for college level programs.

Strong evidence of both the need and the potential of the program to succeed in this role in the East Bay community has been provided by the award of the grants that focus on the Machine Technology Department and partner programs at Laney. These grants are described in the section on grant documentation. Further evidence is provided by the high placement rates documented in the placement appendix.

Goal 1: The Laney College Machine Technology program, working with other CTE programs at Laney and regional community colleges, will work to make Laney and the regional community college system the premier workforce training system for skilled manufacturing workers.

Goal 2: Success will be defined not only by graduation and certificate completion rates, but creating opportunities for jobs and careers that allow our students to succeed at the highest levels of the trades. They will be not only highly skilled machinists but function at a high level of technical literacy that includes mathematical skills, communication skills, and the use of digital manufacturing technologies.

Goal 3: Recruit, graduate, and place non-traditional students in high paying jobs. These non-traditional students include women and young African American and Latino youth that have low participation rates in the field. This is especially true of Oakland youth. We will strive to continue to support our student's education and training efforts by continuing to raise scholarship funds.

Goal 4: Build strong partnerships with local industry that need quality graduates and contribute to our programs by providing internships, employment, and advisory resources.

HOW we will accomplish these goals:
- Connection with industry – We will create connections with industry by attending, organizing, and hosting industrial organization meetings, conferences, speaking events, etc. and use these connections to help place our students. We will also leverage external resources as much as possible (job placement firms, WIBS, CBO's, etc.) to help find jobs and internships.
- Student support services for job placement – we will offer job placement support services to our students in the form of resume workshops, interview workshops, resume books, job fairs, job and internship notifications, internship development, etc.
- World-class training – we will continue to benchmark our classes with industry needs and other training programs to ensure that the training we are giving our students prepares them for work in world-class companies
- Skills certifications – Continue to provide NIMS certification to our students at no cost, through raising outside funding to support those efforts. In Spring 2016 semester Laney Machine Technology students will earn their 200th NIMS certification since 2011.
- Faculty development – we will offer training to our faculty to ensure they are up to date on the latest technological tools and teaching pedagogy to help improve their student training and outcomes.
- Apprenticeship programs – by having Laney, De Anza, and Chabot as the training centers for Bay Area machining and industrial maintenance apprenticeships, we will help create stronger connections with industry to help in job placement of our students and upgraded skills training for incumbent workers.
- Industry support – we will continue and expand our work with local industry to insure that we are meeting their needs in the training of our students and to help line up jobs and internships for our students.
- Outreach to new students – we will continue to seek out new and better ways to find students for our Laney manufacturing programs. This includes open houses, survey courses, "boot" camps, high school visits, workshops, conferences, marketing materials, videos, media exposure, etc. that will inform potential students about our programs and give them (and their teachers, counselors, parents) opportunities to learn about the programs we offer. The focus of these efforts will be the Career Pathways Trust Grants leading to concurrent enrollment and articulation with local high school machining programs.
- Student retention – survey courses, open houses, etc. to help students understand what the courses are about before enrolling. Once students are enrolled, open lab hours, instructional aides, etc. to help them complete courses successfully

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3. Curriculum:

Please answer the following questions and/or insert your most recent curriculum review report (within the past 3 years) here.

See Attached Curriculum Review report

- Have all of your course outlines of record been updated or deactivated in the past three years? If not, list the courses that still need updating and specify when your department will update each one, within the next three years.
  The attached curriculum review outline documents our program and curriculum updates in addition to new programs.

- What are the discipline, department or program of study plans for curriculum improvement (i.e., courses or programs to be developed, enhanced, or deactivated)?
   See curriculum review

- Please list your degrees and/or certificates. Can any of these degrees and/or certificates be completed through Distance Education (50% or more of the course online)? Which degree or certificate?

  The department offers the following degrees and certificates:
  - A.S. Machine Technology (60 units)
  - C.A. Machine Technology (37 units)
  - C.A. Industrial Maintenance (29.5 units)
  Machine Technology is also in the development stages for certificates in:
  - Advanced Industrial Maintenance (planned 22 units)
  - QC inspection (planned 20 units)

  The department offers no instruction through Distance Education.

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4. Assessment:

Please answer the following questions and attach the TaskStream "At a Glance" report for your discipline, department, or program for the past three years Please review the "At a Glance" reports and answer the following questions.

Questions:

- How does your discipline, department or program ensure that students are aware of the learning outcomes of the courses and instructional programs in which they are enrolled? Where are your discipline, department or program course and program SLOs published? (For example: syllabi, catalog, department website, etc. If they are on a website, please include a live link to the page where they can be found)
  Syllabus and website

- Briefly describe at least three of the **most significant changes/improvements** your discipline, department or program made in the past three years as a response to course and program assessment

results. Please state the course number or program name and assessment cycle (year) for each example and attach the data from the "Status Report" section of TaskStream for these findings.

Improvement 1. Changed focus of Mach 30 to G-Code & setup/operation of CNC machines, basic CNC machining. This means more setup and machine operational time for students as opposed to time spent working on CAD/CAM software. This change was recommended by our Manufacturing Advisory Board. Curriculum will be rewritten for Mach 30 by fall 2016.

Improvement 2. Shifted Mach 230 to industrial maintenance machining class emphasis, focusing on shaft machining techniques and fabrication/machining techniques. This recommendation was made by the Industrial Maintenance Advisory Board and became apparent when Mach 208 (Theory, Operation, and Maintenance of Industrial Pumps) fell short of its required machining projects.

Improvement 3. Integrated NIMS (National Institute for Metalworking Skills) projects into basic machining curriculum of Mach 220 & 230. The integration of NIMS projects aligns with our NIMS accreditation and the importance of NIMS certification for our students. Additionally we are in the process of writing specific classes for NIMS certification.

- Briefly describe three of the **most significant examples** of your discipline, department or program plans for course and /or program level improvement for the next three years as result of what you learned during the assessment process. Please state the course number or program name and attach the data from the "Assessment Findings and Action Plan" section for each example.

Plan 1. Continue integration of NIMS projects (with possible certifications) into the department's new programs of Maintenance Technology and Quality Assurance.

Plan 2. Creation of new Dimensional Metrology class and Quality Assurance class, and creation of new Quality Assurance certificate.

Plan 3.

- Describe how assessment results for Distance Education courses and/or programs compare to the results for the corresponding face-to-face classes.
NO DE courses

- Describe assessment results for courses with multiple sections. Are there similar results in each section?
Yes, assessment results are similar and comparable between sections.
  1. **Machine 210 Assessment measure; Safety test & reports**

Mach Tech 210 Outcomes

Outcome 1- Safety

1. Demonstrate basic shop safety and attitudes in all class activities.

Assessment Measure: Safety test and reports
Course level; Direct – Exam

Details/description of the assessment measure/method: Students will pass the machine shop safety test and a safety incident log will be created for each class
Describe the standards for successful performance on this SLO: Students will pass the safety test and report any safety incidents on the safety log.
What percentage of students should successfully meet the standards for this SLO?: !00% should take and pass the safety test.
When do you plan to assess this outcome? (indicate the semester and year): Fall 2013

Assessment Measure Results for Safety test and reports

Summary of Assessment Measure Results: 100% of students passed safety test. 100% of students demonstrated basic shop safety practices in all class activities.
Results: Target performance: Met
What percentage of students successfully met the standards for this SLO?: 100%
Was the assessment information sampled in any way? If so, please describe.: No

Outcome 8

Students will be able to complete a project where they must:
1. Create a plan of operations for completing their part that contains the correct speeds and feeds calculations
2. Determine through calculation and use of research materials, dimensions necessary to perform secondary operations such as threading, counterboring, countersinking, and tapping.
3. Demonstrate the safe setup and operation of the drill press, lathe, and vertical mill in a manner that efficiently produces the required part to the necessary specifications. and
4. Use precision measuring tools to manufacture and inspect their part to required specifications.

Assessment Measure: Outcome 8 M210 assessment
Course level; Direct – Student Artifact

Details/description of the assessment measure/method: Project part(s) made by student are inspected by faculty member using inspection tools and instruments standard to the trade. Department inspection sheet contains all necessary specifications to inspect and evaluate quality of student's work
Describe the standards for successful performance on this SLO: Student must produce part with high enough quality to achieve a passing grade based on the grading rubric for that project (attached)
What percentage of students should successfully meet the standards for this SLO?: 100% will eventually produce passing parts.
When do you plan to assess this outcome? (indicate the semester and year): Spring 2014

Assessment Measure Results for Outcome 8 M210 assessment

Summary of Assessment Measure Results: 95% of students produced passing parts
Results: Target performance: Not Met
What percentage of students successfully met the standards for this SLO?: 95%
Was the assessment information sampled in any way? If so, please describe.: No

2. Machine 220 Assessment Measures;

Student Learning Outcomes

Outcome 1
Demonstrate basic shop safety and attitudes in all class activities.

▼ **Assessment Measure:** Safety test and reports
Course level; Direct – Exam

Details/description of the assessment measure/method: Students will pass the Machine Shop safety test and a safety incident log will be created for each class
Describe the standards for successful performance on this SLO: Students will pass the Machine Shop safety test and record any safety incidents in the safety log.
What percentage of students should successfully meet the standards for this SLO?: 100%
When do you plan to assess this outcome? (indicate the semester and year): Fall 2014

Assessment Measure Results for Safety test and reports

Summary of Assessment Measure Results: Students must pass Machine Shop safety test and enter safety incidents into safety log
Results: Target performance: Met
What percentage of students successfully met the standards for this SLO?: 100%
Was the assessment information sampled in any way? If so, please describe.: No

Outcome 2
Analyze engineering drawings and blueprints to determine parts features sizes, locations, tolerances, relationships, fits and finishes and material conditions.

▼ **Assessment Measure:** Analyze drawings, determine part features specifications
Course level; Direct – Student Artifact

Details/description of the assessment measure/method: Students will analyze engineering drawings and blueprints to determine parts features sizes, locations, tolerances, relationships, fits and finishes and material conditions.
Describe the standards for successful performance on this SLO: Students must complete parts with passing grade based on drawing specifications
What percentage of students should successfully meet the standards for this SLO?: 90%
When do you plan to assess this outcome? (indicate the semester and year): Fall 2014

Assessment Measure Results for Analyze drawings, determine part features specifications

Summary of Assessment Measure Results: Students must complete parts with passing grade based on drawing specifications
Results: Target performance: Exceeded
What percentage of students successfully met the standards for this SLO?: 95%
Was the assessment information sampled in any way? If so, please describe.: No

Outcome 4
Analyze existing and required material conditions and apply necessary heat-treat processes such as carburizing, hardening, quenching and tempering.

▼ **Assessment Measure:** Heat treating
Course level; Direct – Student Artifact

Details/description of the assessment measure/method: Students will heat treat steel project parts
Describe the standards for successful performance on this SLO: Students must complete heat treatment process to specifications
What percentage of students should successfully meet the standards for this SLO?: 75%
When do you plan to assess this outcome? (indicate the semester and year): Fall 2014

Assessment Measure Results for Heat treating

Summary of Assessment Measure Results: Students must complete heat treatment process to specifications
Results: Target performance: Exceeded
What percentage of students successfully met the standards for this SLO?: 80%
Was the assessment information sampled in any way? If so, please describe.: No

Outcome 7
Demonstrate the safe setup and operation of the drill press, lathe, vertical mill, surface grinder and their various accessories and work holding methods in a manner that efficiently produces the required parts to the necessary specifications.

▼ **Assessment Measure:** Safe setup & operation of lathe, mill, surface grinder
Course level; Direct – Student Artifact

Details/description of the assessment measure/method: Demonstrate the safe setup and operation of the drill press, lathe, vertical mill, surface grinder and their various accessories and work holding methods in a manner that efficiently produces the required project parts to the necessary specifications.
Describe the standards for successful performance on this SLO: Students must complete the assigned project with a passing grade
What percentage of students should successfully meet the standards for this SLO?: 85%
When do you plan to assess this outcome? (indicate the semester and year): Fall 2014

Assessment Measure Results for Safe setup & operation of lathe, mill, surface grinder

Summary of Assessment Measure Results: Students must complete the assigned project with a passing grade
Results: Target performance: Exceeded
What percentage of students successfully met the standards for this SLO?: 95%
Was the assessment information sampled in any way? If so, please describe.: No

Machine 230 outcomes & assessment measures;

Machine Technology 230 Outcome Set

Student Learning Outcomes

1. M 230 Shop Safety

1. Demonstrate basic shop safety and attitudes in all class activities.

▼ **Assessment Measure:** 1. Demonstrate basic shop safety and attitudes in all class activities.

Course level; Direct - Other

Details/description of the assessment measure/method: Shop safety test, observation and notation in shop safety log.

Describe the standards for successful performance on this SLO: 100% of students will comply with shop safety rules

What percentage of students should successfully meet the standards for this SLO?: 100% of students will comply with shop safety rules

When do you plan to assess this outcome? (indicate the semester and year): Fall 2014

Supporting Attachments:

SAFETY-INCIDENT-REPORTING-FORM.doclink opens in new window (Microsoft Word)

Assessment Measure Results for 1. Demonstrate basic shop safety and attitudes in all class activities.

Summary of Assessment Measure Results: Students passed Machine Shop safety test and entered safety incidents in safety log

Results: Target performance: Met

What percentage of students successfully met the standards for this SLO?: 100%

Was the assessment information sampled in any way? If so, please describe.: No

3. M 230 Precision Measurement

3. Use precision measuring tools, indicators and test equipment to manufacture and inspect parts to required engineering specifications.

Assessment Measure: M 230 Precision Measurement

Course level; Direct - Student Artifact

Details/description of the assessment measure/method: Instructor will verify student's measurements on part inspection sheet.

Describe the standards for successful performance on this SLO: Students will be able to perform accurate measurements within .0001 inch range.

What percentage of students should successfully meet the standards for this SLO?: 90% of students will be able to perform accurate measurements within .0001 inch range.

When do you plan to assess this outcome? (indicate the semester and year): Fall 2014

Assessment Measure Results for M 230 Precision Measurement

Summary of Assessment Measure Results: Student projects reflect accurate measurements while completing parts

Results: Target performance: Exceeded

What percentage of students successfully met the standards for this SLO?: 95%

Was the assessment information sampled in any way? If so, please describe.: No

6. M230 Plan of Operations

6. Develop a plan of operations to manufacture and repair parts to required specifications using multiple machine tools with their accessories and industrial processes such as faceplate mounting, eccentric cuts, precision fits, precision taper

Assessment Measure: M 230 Plan of Operations

Course level; Direct - Student Artifact

Details/description of the assessment measure/method: Project planning worksheets

Describe the standards for successful performance on this SLO: 100% of students will successfully develop a working order of operations that covers all processes, machining, tooling, and necessary calculations.

What percentage of students should successfully meet the standards for this SLO?: 100% of students will successfully develop a working order of operations that covers all processes, machining, tooling, and necessary calculations.

cuts, heat-treating and hardness testing.

When do you plan to assess this outcome? (indicate the semester and year): Fall 2014

Assessment Measure Results for M 230 Plan of Operations

Summary of Assessment Measure Results: Students complete a plan of operations to manufacture parts to required specifications

Results: Target performance: Met

What percentage of students successfully met the standards for this SLO?: 100%

Was the assessment information sampled in any way? If so, please describe.: No

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8. M230 Mathematics

8. Integrate trigonometry and related functions into calculation and setup of angles, workholding devices, tapers, and use of sine bars and sine plates.

Assessment Measure: M 230 Mathematics

Course level; Direct - Student Artifact

Details/description of the assessment measure/method: Project Planning worksheets, and part inspection sheets

Describe the standards for successful performance on this SLO: 90% of students will successfully develop a working knowledge of the practical use of mathematics and math-based tools and devices in planning and executing manufacturing operations

What percentage of students should successfully meet the standards for this SLO?: 90% of students will successfully develop a working knowledge of the practical use of mathematics and math-based tools and devices in planning and executing manufacturing operations

When do you plan to assess this outcome? (indicate the semester and year): Fall 2014

Assessment Measure Results for M 230 Mathematics

Summary of Assessment Measure Results: Students use mathematics including trigonometry to calculate, set up and manufacture angles and tapers to specified tolerances.

Results: Target performance: Met

What percentage of students successfully met the standards for this SLO?: 90%

Was the assessment information sampled in any way? If so, please describe.: No

- Describe your discipline, department or program participation in assessment of <u>institutional level</u> outcomes (ILOs).

We have participated in ILO Outcomes #3 (CTE Skills) and #4 (Global Awareness, Ethics & Civic Responsibility). In 2015-16 we will participate in ILO Outcome #2; Critical Thinking.

- How are your course and/or program level outcomes aligned with the institutional level outcomes? Please describe and attach either your Laney Assessment Spreadsheet or "Goal Alignment Summary" report from TaskStream. See spreadsheet Machine Technology mapped to Laney ILO.

- Describe your discipline, department or program participation in assessment of <u>institutional level</u> outcomes (ILOs).
  The Machine Technology department has had marginal participation of the institutional ILO's. We have extensive assessment and data from third party source on ILO Outcome #3 (CTE Skills). For Outcome #2 (Critical Thinking), we have strong data based on employer test results for competitive positions for machinists and maintenance technicians. Our students score extremely high with high pass rates in all phases of the competitive testing process including written, mathematical, problem solving and interviewing. We are unable to quantify the results but based on students reports, and employer feedback our students are doing well in the testing process.

- How are your course and/or program level outcomes aligned with the institutional level outcomes? Please describe and attach the "Goal Alignment Summary" from TaskStream.

Institutional Learning Outcome #1: *Communication* Students will effectively express and exchange ideas through various modes of communication.	Institutional Learning Outcome #2: Critical Thinking and Problem Solving Students will be able to think critically and solve problems by identifying relevant information, evaluating alternatives, synthesizing findings and implementing effective solutions.	Institutional Learning Outcome #3 Career Technical Skills Students will demonstrate technical skills in keeping with the demands of their field of study.	Institutional Learning Outcome #4: Global Awareness, Ethics and Civic Responsibility Students will be prepared to practice community engagement that addresses one or more of the following: environmental responsibility, social justice and cultural diversity.	Institutional Outcom Persona Profess Develop Students wi their knowle and abilit personal professiona health and w
Machine Technology				
Machine Technology 20			Mapped/Assessment Measure Added	
Machine Technology 200				
Machine Technology 205		Mapped/Assessment Measure Added	Mapped/Assessment Measure Added	
Machine Technology 206				
Machine Technology 208				
Machine Technology 210		Mapped/Assessment Measure Added	Mapped/Assessment Measure Added	
Machine Technology 220				
Machine Technology 230				

Machine Technology 248GA				
Machine Technology 255				
Machine Technology 30				
Machine Technology 31				
Machine Technology 75				
Machine Technology AS				
Machine Technology CA				

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5. Instruction:

- Describe effective and innovative strategies used by faculty to involve students in the learning process.

  1.The department is deeply committed to an integrated basic skills approach that stresses strong contextualization across the curriculum and is recognized across the state for its leadership in these areas. The success of this strategy has been demonstrated over the last four years by the high award rates of IMM students. For the past four years over 50% of the student sin the cohort have earned Industrial Maintenance Certificates, and significant numbers have earned machine Technology certificates and AS Degrees.
  2. The department has used a high percentage of its grant funding to support instructional aides in laboratory based classes.
  3. Machine Technology has purchased a number of simulation software to assist our students in classes that are software and machine integrated.
  4. The department has also vigorously pursued scholarship funds that pay for books, tuition, and enable our students to purchase tooling and computers that help prepare them success in industry.
  5. Machine Technology students participate in up to ten paid internships a year where they get on the job experience working for companies such as EBMUD, Union Sanitary District, Oro Loma District, Shell Oil, Dow Chemical, POSCO Steel and UC Berkeley.
  6. Machine Technology has invested significant funding into NIMS Certification that has provided increased technical resources to our students and earned them industry certifications.
  7. We recently partnered with the National Tooling and Machining Association (NTMA) that will give them access to free online training and simulation.

- How has new technology been used by the discipline, department or program to improve student learning?
  The department's efforts in adopting classroom technology are lacking. In our classes where software and machines are integrated or computer based our computer lab has significant technology. In most classes outside of the lab, there is little adoption of video technologies and much of our faculty needs professional development in educational technologies.

- How does the discipline, department, or program maintain the integrity and consistency of academic standards with all methods of delivery, including face to face, hybrid, and Distance Education courses?

We offer no DE or Hybrid courses.

- How do you ensure that Distance Education classes have the same level of rigor as the corresponding face-to-face classes?

  NA

- Briefly discuss the enrollment trends of your discipline, department or program. Include the following:

  o Overall enrollment trends in the past three years
    These enrollment numbers are not defined (students in all classes or single students, possibly taking a number of classes) and do not align with any data in the BI tool or our own data.

    The department's enrollment numbers have gradually increased until the past year. As the economy improves, there is less a sense of urgency for new skills training. This makes recruitment more difficult. We actively recruit students through the Laney Career Fair, winter and summer orientations before the start of classes, and participation in our industry and community partners' career fairs. We also work closely with a number of high schools including Granada High and Livermore High in Livermore, San Leandro High, and John Swett High in Crockett.

MACH Enrollment

Headcount	Term								
	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
Total	18	161	151	24	154	161	14	166	141

  o An explanation of student demand (or lack thereof) for specific courses.
    Student demand has dropped slightly the past year due in part to the economy improving. Our classes are still full, but it is taking greater effort to fill them. We are working with District CTE and SB 1070 Bay Region committee to develop CTE specific marketing campaigns. We also vigorously recruit students through development and printing of literature, orientations during the summer and winter breaks, work closely with local high schools in helping to build out their machining and manufacturing programs.

  o Productivity for the discipline, department, or program compared to the college productivity rate.

MACH Productivity Rate

	Term								
	2012 SUMMER	2012 FALL	2013 SPRING	2013 SUMMER	2013 FALL	2014 SPRING	2014 SUMMER	2014 FALL	2015 SPRING

| Productivity | 8.74 | 14.76 | 14.66 | 6.29 | 14.55 | 15.19 | 4.26 | 12.91 | 12.93 |

Laney College Productivity Rate

| Productivity | Term | | | | | | | | |
	2012 SUMMER	2012 FALL	2013 SPRING	2013 SUMMER	2013 FALL	2014 SPRING	2014 SUMMER	2014 FALL	2015 SPRING
Total	16.76	17.63	17.41	16.40	16.53	16.48	15.05	15.40	15.41

Salient factors, if known, affecting the enrollment and productivity trends you mention above.
Machine Technology productivity rates are maxed at 14.5 to 15.0 based on issues like safety and maximum number of work stations. The slight drop in productivity is based on the rollout of new advanced classes in Industrial Maintenance that tend to have lower enrollment. We are working on recruiting efforts for those classes. Currently those classes are stand alone classes and not part of any certificate or degree. Our plan is to have the new certificate finished by Fall 2016. We are also trying to align those classes with California Water Education classes so employees in the water and waste-water industries can use them for CWE credit.
One factor that is impacting all Laney enrollments is the collapse of the student services side of the college. 35% of our students are evening or Saturday students, yet we are only open one night a week and no Saturday's. This creates huge access problems for our working students.   .

- Are courses scheduled in a manner that meets student needs and demands? How do you know?
  The machine shop is running classes from 8:00 AM thru 10:00 PM Mon-Thur and 9:00 AM – 2:00 PM on Saturday. G-130 the Industrial Maintenance lab is currently underutilized but is being built out for the Industrial Maintenance program.

- Recommendations and priorities.
  Expand student services for evening students in counseling, A&R, Welcome Center and Assessment. Currently we steer our students around the matriculation process so they can enroll in our classes.

_____

6. Student Success:

- Describe course completion rates *(% of students that earned a grade "C" or better or "Credit")* in the discipline, department, or program for the past three years. Please list each course separately. How do the discipline, department, or program course completion rates compare to the college course completion standard?

MACH Student Success

	Term								
	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
Success%	94.44%	67.68%	72.17%	76.92%	72.68%	71.72%	100.00%	70.09%	83.33%

Laney College Completion Standard

	Term								
	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
Success%	74.07%	68.72%	66.34%	73.40%	66.34%	67.98%	72.79%	68.95%	69.11%

Department/discipline course completion rates

Success	Term								
Course	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
MACH 20 - CAD WITH SOLIDWORKS	NA	65.00%	85.71%	NA	69.57%	84.62%	NA	72.22%	62.96%
MACH 200 - SPECIAL PROJECTS LAB	94.44%	88.89%	80.00%	0.00%	71.43%	66.67%	100.00%	90.00%	100.00%
MACH 205 - ENGINEERING DRAWINGS	NA	43.75%	57.50%	NA	62.96%	62.00%	NA	53.57%	NA
MACH 206 - INDUSTRIAL HYDRAULICS	NA	78.57%	73.08%	NA	75.00%	67.74%	NA	85.71%	80.95%
MACH 208 - OPER/MAINT INDUSTRIAL PUMPS	NA	NA	70.00%	NA	NA	NA	NA	NA	NA
MACH 210 - MACHINE TECH I	NA	74.58%	75.00%	NA	74.19%	66.67%	NA	70.00%	87.18%
MACH 220 - MACH TECH II	NA	70.83%	80.49%	NA	70.59%	80.00%	NA	70.59%	85.71%
MACH 230 - MACHINE TECH III	NA	66.67%	55.56%	NA	79.17%	66.67%	NA	89.47%	77.78%
MACH 255 - SVY COURSE/SKILLED TRADES	NA	NA	NA	NA	NA	NA	NA	90.00%	NA
MACH 30 - CNC PROGMNG/CAD-CAM	NA	68.18%	NA	NA	77.27%	NA	NA	60.00%	NA
MACH 31 - ADV CNC & CAD/CAM	NA	NA	73.68%	NA	NA	89.47%	NA	NA	93.10%
MACH 75 - GEO DIMEN/TOLERANCNG	NA	NA	NA	83.33%	NA	NA	NA	NA	NA
Grand Total	94.44%	67.68%	72.17%	76.92%	72.68%	71.72%	100.00%	70.09%	83.33%

Discussion: Laney College Machine Technology students succeed at rates equal to or slightly higher than Laney students as a whole. In our introductory classes machine 210 and 205 we have slightly lower rates than the rest of our classes. We find many first time students are just trying out the class to see if they like it, find they don't then drop the class or disappear and fail.

- Describe course completion rates in the department **for Distance Education** courses (100% online) for the past three years. Please list each course separately. How do the department's Distance Education course completion rates compare to the college course completion standard?

No MACH DE courses from Summer 2012 to Spring 2015

Laney College DE Student Success

	Term	

	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
Success%	70.05%	57.60%	50.86%	57.64%	51.30%	54.86%	62.58%	54.77%	51.44%

- Describe course completion rates in the department **for Hybrid** courses (less than 100% online) for the past three years. Please list each course separately. How do the department's Hybrid course completion rates compare to the college course completion standard?

No MACH Hybrid courses from Summer 2012 to Spring 2015

Laney College Hybrid Student Success

Term	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
Success%	60.54%	58.81%	68.39%	68.33%	58.44%	55.12%	68.27%	62.05%	61.76%

- Are there differences in course completion rates between face to face and Distance Education/hybrid courses? If so, how does the discipline, department or program deal with this situation?
  NA
- How do you assess the overall effectiveness of Distance Education course?

  NA

- Describe the discipline, department, or program retention rates *(After the first census, the percent of students earning any grade but a "W" in a course or series of courses).* for the past three years. How does the discipline, department, or program retention rate compare to the college retention standard?

MACH Retention

Term									
	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
Retention%	100.00%	81.82%	85.22%	92.31%	82.99%	76.64%	100.00%	80.84%	86.67%

Laney College Retention Standard

	2012 Summer	2012 Fall	2013 Spring	2013 Summer	2013 Fall	2014 Spring	2014 Summer	2014 Fall	2015 Spring
Retention%	84.30%	83.71%	79.07%	84.20%	81.31%	79.46%	84.68%	81.53%	81.25%

Discussion:
Laney Machine Technology students have retention rates equal to or slightly higher than Laney students as a whole

- What has the discipline, department, or program done to improve course completion and retention rates? What is planned for the next three years?
  The department has spent significant amounts of grant funding for instructional aides and counseling support to raise our success and retention rates. We are applying for a full time classified instructional

aide in this program review to institutionalize the success we have experienced with our IAs. We are continuing work with the Basic Skills Group to continue to contextualize our program.

- What has the discipline, department, or program done to improve the number of degrees and certificates awarded?   Include the number of degrees and certificates awarded by year, for the past three years. What is planned for the next three years?
  As demonstrated by the figures below, the department has shown a 400% increase in students earning certificates and degrees. I feel the following factors are the major contributors to this increase:
    1. A demonstrated strong demand for employment in this field with a clear pathway to middle income wages and benefits. Many of our employers insist on completion of the degree.
    2. Strong student support academically (instructional aides) and financially through the scholarship money we have raised for students.
    3. Imbedded counseling through the use of grant funding that enables every student to have a clear vision of the necessary steps to earn the degree.
    4. Contextualization through a strong relationship to the Basic Skills Group and the Math Department primarily in the highly successful IMM cohort program but also across the curriculum.
  We hope to institutionalize as many of these factors as possible and continue build these numbers.

	2012-2013	2013-2014	2014- 2015
Machine Technology (AS)	2	3	9
Industrial Maintenance (CA)	1	16	12
Machine Technology (CA)	6	7	15

7. Human, Technological, and Physical Resources (including equipment and facilities):

- Describe your current level of staff, including full-time and part-time faculty, classified staff, and other categories of employment.

  Full-time faculty headcount _____2_____

  Part-time faculty headcount _____4_____

  Total FTEF faculty for the discipline, department, or program _____3.6

  Full-time/part-time faculty ratio ___2 to 1_____

Classified staff headcount __full time 0_____

- Describe your current utilization of facilities and equipment.
  The Machine Technology primary facility (G-100 and adjacent classroom are in use from 8:00 AM – 10:00 PM Mon-Thursday and Saturday from 9:00 -2:00PM. The adjacent computer lab is scheduled from 6PM -10PM Mon-Thur. An additional Mach 31class was canceled due to failure to find an instructor. We currently have lab time on Saturday from 9:00 AM – 2:00 PM for additional CNC machine access for the Mon-Wed class. If we can find an instructor we will run the Mach 30 and 31 class again on Saturdays. The G-130 lab is being used on Monday evening for Mach 206 and a welding class on Tues- Thur afternoon. As our advanced and QC classes get built out G-130 will see more use.

- What are your key staffing needs for the next three years? Why? Please provide evidence to support your request such as assessment data, student success data, enrollment data, recommendations from your advisory committee, changes in certification requirements, and/or other factors.
  1. Full time classified instructional aide that will assist in shop maintenance, ordering materials and tools, lab prep, and lab instructional assistance. Over the last three years the department has spent approximately $50,000 from various grant funds to provide temporary classified instructional aides. This is investment has resulted in significant improvement in certificate and degree completion rates. As these temporary aides find full time jobs, there is a need to constantly replace them creating training issues and a limited level of work they can take on. The strong increase in certificates and degrees supports the college taking on this position on a full time basis.
  2. Full time IT support. Currently the CTE division has one part time IT support. Curretnly this person supports 11 departments and 5 labs for a total of over 200 computers, numerous servers, licenses, printers and plotters. Many of these computers in the CTE labs are integrated into Machine Controls or simulators and running proprietary licensed software. More importantly our current IT support is available in the evenings when most of our computer labs are in use. If CTE loses our It support our programs and the college will have a hard time running these classes.

- What are your key technological needs for the next three years? Why? Please provide evidence to support your request such as assessment data, student success data, enrollment data, recommendations from your advisory committee, changes in certification requirements, and/or other factors.
  1. Our classroom technology in G-120, (one of our primary instructional classrooms) is non-existent. We need some type of overhead projector in that department. WE also need professional development in the use of these technologies for some of our veteran faculty.

- What are your key facilities needs for the next three years? Why? Please provide evidence to support your request such as assessment data, student success data, enrollment data, recommendations from your advisory committee, changes in certification requirements, and/or other factors.

1. Our Industrial Maintenance Lab (G-130) is an electrical mess. Only one side of the room has working outlets and there are numerous electrical 208 three phase panels in the room that are unmarked or not powered up. As we build out that lab we will need reliable power. The current system of unmarked panels is a safety hazard and an OSHA violation.

- # Please complete the Comprehensive Instructional Program Review Prioritized Resource Requests Template included in Appendix A.

---

8. Community, Institutional, and Professional Engagement and Partnerships:

Part A.
- Discuss how faculty and staff have engaged in institutional efforts such as committees, presentations, and departmental activities. Please list the committees that full-time faculty participate in.
  Machine Technology Faculty are involved in the following committees.
    1. Curriculum committee
    2. AB 86 Adult Basic Ed
    3. Hiring committees
    4. Laney Faculty Senate
    5. Laney College Council
    6. State Academic Senate Career Technical Education Committee
    7. Laney Career Technical Education Advisory Committee
    8. PCCD Career Technical Education Advisory Committee
    9. PCCD Facilities Committee Co-chair
    10. Career Pathways Trust Advanced Manufacturing and Engineering Pathways Committee
    11. BACCC Laney CTE Liaison
    12. Tenure Review Committees

- Discuss how faculty and staff have engaged in community activities, partnerships and/or collaborations.
  Laney Machine Technology Department has engaged with a wide variety of college and community organizations to support our students. We work with a broad range of industry and educational organizations to shape educational and training policies across the state. We have hosted two Northern California HTEC Conferences for schools working in machining and manufacturing that

had over 250 attendees at both conferences. We have participated in local, regional and national HTEC meetings to better understand what is happening in manufacturing.

The department has also collaborated across disciplines at Laney to build multi-discipline curriculum and worked regionally with a number of machining programs to build regional curriculum.

- Discuss how adjunct faculty members are included in departmental training, discussions, and decision-making.

  Faculty meets as a whole twice a semester to discuss any departmental issues. Adjunct faculty are constantly queried on any needs they might have to meet or improve their student's success.

Part B.

- What are the job placement rates for your discipline/department/program for the past three years?
  See attached placement data

- What are the projected job openings in your discipline for the next three years?
  See attached data in employment folder.

- How is the discipline/department program responding with regard to labor market demand?
  The department is deeply engaged with local and regional

- Do you have an advisory board in place? Has it met regularly? Please provide a list of your advisory board members and attach agendas and meeting minutes from the past year.
  See attached folder with advisory board members and minutes.

- Please describe the number of activities and recommendations resulting from advisory committee meetings that have occurred in the past three years. What information was presented that required changes to be made to your program?
  1. The development of the Industrial Maintenance Certificate was based on the recommendations of our IM industry advisory committee. Further development of the Advanced Industrial Maintenance Certificate has also been led by our Advisory Committee.
  2. Our Manufacturing Advisory Committee recommended focusing on teaching only G code, tool length offsets, in Machine Tech 30 and not starting MasterCam until Machine Tech 31.
  3. Our manufacturing Advisory committee also recommended working on a Quality Control certificate which we have started.

- Does your program require state or national licensing? Please explain. What is your licensing status?
  There is no requirement for state or national licensing.

The Machine Technology Program has been accredited by the National Institute of Metal Working Skills.

- Do your students participate in third party certifications? What are their success rates (include the # of students, # of certifications, etc.).

    Our students earn metalworking certifications from NIMS in a voluntary basis. Currently 196 certificates have been earned by Laney Machine Technology students. Their pass rate is 196 certificates earned out of 198 attempted tests. This pass rate is equal to 98.9%.

- Is your discipline/department/program working with a Deputy Sector Navigator? If so, in which sector? Briefly describe your discipline/department/program's work with the Deputy Sector Navigator.

    Laney Machine Technology is working with the Bay Area DSN for manufacturing in many areas including machinist apprenticeship, expansion of internships, NIMS Accreditation and Certification, and regional program and curriculum work around Quality Control certificate. We are also working closely with the DSN in rebuilding and upgrading high school and adult education manufacturing programs.

- In which ways is your discipline/department/program collaborating with other community colleges in the region? What similar programs exist in the surrounding area or nearby colleges?

    Laney is currently working with Machine Technology programs across the Bay Area in NIMS Certification and Accreditation, BACCC Industrial Maintenance marketplace, Development and expansion of machinist apprenticeship, curriculum and program development for Quality Control Certificate.

- Is your discipline/department/program currently participating in any grants? Please list and briefly describe the grant name, granting agency and the goals of the grant as it relates to your discipline/department/program.

Grant Name	Granting Agency	Grant Goals
Career Advancement Academy	State of California through Career Ladders	Machine Technology has used this funding to support development of contextualized Math and English curriculum that has led to improved certificate and degree completion.
Career Pathways Trust	California Department of Education	Machine Technology has used this funding to support articulation alignment with San Leandro High and develop Career Coaches in OUSD
CTE Enhancement Funds (60%)	State funded through Bay Area Community College Consortium	Machine Technology partnered with Carpentry, Architecture, Wood Technology, and Welding to fund equipment for

		the Laney Fab Lab
CTE Enhancement Funds (40%)	State funded through Bay Area Community College Consortium	Machine Technology is part of a regional partnership with Santa Rosa Junior College, San Jose City College and De Anza College to develop a Quality Control Certificate of Achievement. Funds will be used for curriculum development and purchase of tooling and equipment.
TAACCT Grant	U.S. Department of Labor	The TAACCCT has funded the purchase of $400,000.00 in new equipment and tooling over the last three years and funded instructional assistants for our labs. This has led to improved success rates including certificates and degrees. This grant has also paid for the development of our Advanced Industrial Maintenance Certificate curriculum.
Proposition 39 Grant	State of California	Machine Technology is using this grant to build out the Industrial Maintenance Certificate and Advanced Certificate and Industrial Maintenance Lab. Funds are being used for curriculum development and purchase of tooling and equipment. This grant is also being used to algin our Industrial Maintenance Curriculum with California Water Education curriculum and make it eligible for professional credit. We feel this will improve enrollment in the advanced certificate.
Chevron Grant	Chevron Foundation	Chevron funding was used to run past summer programs for youth and currently being used to fund instructional assistants in our lab classes.
Carl D. Perkins Grant	U.S. Department of Education through state of California.	Perkins funding is used to address non-traditional populations and innovation in our programs. Machine Technology is using this to

		purchase a surface profilometer for our Quality Control Certificate
Advance Manufacturing Jobs and Innovation Accelorator Grant (AM2PED)	Department of Labor	The AM2PED grant has been used to fund purchase of our 3D solid modeling software and support student access to National Institute of Metalworking Skills Certification and successful accreditation by NIMS.
CTE Transition Grant	State of California through Carl Perkins Act and U.S. DOE	CTE Transition Funding is the major funding source for our Laney Career Fair. This event is designed to open our labs to high school students, teachers and counselors. It is also funding orientation and outreach meetings during the winter and summer breaks to improve enrollment.
California Apprenticeship Initiative	Chancellor's Office Community Colleges California	Expand apprenticeship in California with community colleges as classroom training provider. Machine Technology would work with local industry and East Bay Advanced Manufacturing Transportation Training Council to provide related supplemental instruction (RSI) to manufacturing apprentices.

_____

9. Professional Development:

- Please describe the professional development needs of your discipline or department. Include specifics such as training in the use of classroom technology, use of online resources, instructional

methods, cultural sensitivity, faculty mentoring, etc.
Our faculty could use professional development in the area of classroom technologies.

- How do you train instructors in the use of Distance Education platforms? Is this sufficient?

  NO DE courses

_____

10. **Disciple, Department or Program Goals and Activities:**

- Briefly describe and discuss the discipline, department or program goals and activities for the next three years, including the rationale for setting these goals. NOTE: Progress in attaining these goals will be assessed in subsequent years through annual program updates (APUs).

- Then fill out the goal setting template included in Appendix B. which aligns your discipline, department or program goals to the college mission statement and goals and the PCCD strategic goals and institutional objectives.

  Activities, Rationale, and Measurable Outcomes
- **Goal 1:** The Laney College Machine Technology program, working with other CTE programs at Laney and regional community colleges, will work to make Laney and the regional community college system the premier workforce training system for skilled manufacturing workers.
  Rationale: Highly skilled machinists and maintenance machinists will be a key component in a successful East Bay economy. They will also be a key skill needed to address Bay Area infrastructure issues in coming years.
  Measurable Outcomes:

- **Goal 2:** Success will be defined not only by graduation and certificate completion rates, but creating opportunities for jobs and careers that allow our students to succeed at the highest levels of the trades. They will be not only highly skilled machinists but function at a high level of technical literacy that includes mathematical skills, communication skills, and the use of digital manufacturing technologies.
  Rationale: Success in the future will depend not only on the abilities our students possess when they leave our program and enter industry , but their ability to adapt to changing technologies in the future.
  Measurable Outcomes:

- **Goal 3:** Recruit, graduate, and place non-traditional students in high paying jobs. These non-traditional students include women and young African American and Latino youth that have low participation rates in the field. This is especially true of Oakland youth. We will strive to continue to support our student's education and training efforts by continuing to raise scholarship funds.
  Rationale: As an Oakland/East Bay community and tax based organization it is critical that the opportunities outlined in this document be easily accessible to all of our community.
  Measurable Outcomes: Institutionalizing funding of the highly successful IMM program

- **Goal 4:** Build strong partnerships with local industry that need quality graduates and contribute to our programs by providing internships, employment, and advisory resources.
  Rationale: The success of our students and our program will be closely tied to the level we can provide local industry and public agencies with the employees and skills they need to be successful.

Measurable Outcomes:

- **Goal 5:** Recruit and train new faculty from industry and former students that are committed to the goals of the Laney College Machine Technology Program.
  Rationale: The goals and efforts outlined in this document will demand an increase in the quantity and quality of our departmental leadership and staff. Unless the department can find increased level of staffing from industry and grow our own human resources, we will be hard pressed to achieve these goals.
  Measurable Outcomes:

- # Please complete the Comprehensive Instructional Program Review Integrated Goal Setting Template included in Appendix B.

Appendices

Appendix A

CTE Program Review
Prioritized Resource Requests Summary for Additional (New) Resources

College: Laney College

Discipline, Department or Program: Machine Technology and Industrial Maintenance

Contact Person: Louis Quindlen

Date: ___ 2/16/16

Resource Category	Description	Priority Ranking (1 – 5, etc.)	Estimated Cost	Justification (page # in the program review narrative

				report)
Human Resources: Faculty	Recruit part time faculty to address expanded program needs and future retirements. Prepare for succession of current full time faculty who will be retiring in 3-4 year window.	1		Page 30
Human Resources: Classified	1. Full time Instructional Aide to assist faculty in maintenance, materials and tool ordering and lab preparation. 2.Full time IT support for all CTE programs, labs and servers.		$50-60K annual	Page 24 Page 24
Human Resources: Student Workers	Current student workers will have grant funding.			
Technology	Classroom instructional technology in G-120		$1500	Page 24
Equipment	Planned equipment and tooling purchases will be funded by various grant sources and anticipated CTE funding increase.			
Supplies	Current and future grants, lottery funds, and small general fund allocations should be able to cover anticipated supplies (metal needs)		$8-10K per year	
Facilities	Electrical upgrade in IMM lab (G-130) Currently this room is an electrical mess with numerous safety violations, unpowered and unlabeled 3 phase outlets.		Depends on level of problems. We have been requesting assessment of the situation for the past year.	Page 24
Professional Development	Current staff could use professional development in use of educational technologies			Page 24
Other (specify)				

Appendix B

PCCD Program Review
Alignment of Goals Template

College: __Laney College_____

Discipline, Department or Program: Machine Technology

Contact Person: Louis Quindlen

Date: _____2/16/16

Discipline, Department or Program Goal	College Goal	PCCD Goal and Institutional Objective
Recruit, graduate, and place non-traditional students in high paying jobs. These non-traditional students include women and young African American and Latino youth that have low participation rates in the field. This is especially true of Oakland youth. We will strive to continue to support our student's education and training efforts by continuing to raise scholarship funds.	**Student Success:** Develop new and strengthen existing interventions and strategies to increase students' access and success	Advance Student Access, Equity and Success
2.	**Accreditation:** take the necessary actions to reaffirm Laney College's accreditation, bolster institutional effectiveness and complete the 2016 follow-up report	
Success will be defined not only by	Assessment: Ensure	Strengthen Accountability,

graduation and certificate completion rates, but creating opportunities for jobs and careers that allow our students to succeed at the highest levels of the trades. They will be not only highly skilled machinists but function at a high level of technical literacy that includes mathematical skills, communication skills, and the use of digital manufacturing technologies.	completion of the assessment cycle for SLOs, ILOs, SSOs, IAOs, and PLOs	Innovation and Collaboration
Recruit and train new faculty from industry and former students that are committed to the goals of the Laney College Machine Technology Program.	**Resources**: Increase, develop, and manage the College's resources in the areas of personnel, finances, facilities, technology, and partnerships in order to advance the quality of education provided.	Develop and Manage Resources to Advance our Mission
Build strong partnerships with local industry that need quality graduates and contribute to our programs by providing internships, employment, and advisory resources.	**Integrated Planning & Total Cost of Ownership;** Define, document, communicate, and evaluate the structures, roles, responsibilities, and processes used to integrate human resources, facilities, and fiscal planning in support of student learning and achievement.	Engage and leverage Partners
The Laney College Machine Technology program, working with other CTE programs at Laney and regional community colleges, will work to make Laney and the regional community college system the premier workforce training system for skilled manufacturing workers.		Develop programs of Distinction
7.		
8.		

Appendix C

Program Review Validation Form and Signature Page

College:

Discipline, Department or Program:

Part I. Overall Assessment of the Program Review Report

Review Criteria	Comments: Explanation if the box is not checked
☐ 1. The narrative information is complete and all elements of the program review are addressed. ☐ 2. The analysis of data is thorough. ☐ 3. Conclusions and recommendations are well-substantiated and relate to the analysis of the data. ☐ 4. Discipline, department or program planning goals are articulated in the report. The goals address noted areas of concern. ☐ 5. The resource requests are connected to the discipline, department or program planning goals and are aligned to the college goals.	

Part II. Choose one of the Ratings Below and Follow the Instructions.

Rating	Instructions
▪ 1. Accepted.	1. Complete the signatures below and submit to the Vice President of Instruction.
▪ 2. Conditionally Accepted.	2. Provide commentary that indicates areas in the report that require improvement and return the report to the discipline, department or program chair with a timeline for resubmission to the validation chair.
▪ 3. Not Accepted.	3. Provide commentary that indicates areas in the report that require improvement and return the report to the discipline, department or program chair with instructions to revise. Notify the Dean and Vice President of Instruction of the non-accepted status.

Part III. Signatures

Validation Team Chair

_____   _____   _____
Print Name   Signature   Date

Discipline, Department or Program Chair

_____   _____   _____
Print Name   Signature   Date

Received by Vice President of Instruction

_____   _____   _____
Print Name   Signature   Date