COLORADO COMMUNITY COLLEGE SYSTEM

FACULTY PLA GUIDE

Help students earn credit for what they already know in

Advanced Manufacturing Disciplines

Through Prior Learning Assessment (PLA)

What is PLA?

Prior Learning Assessment (PLA) allows students to demonstrate their knowledge, skills, and learning acquired from the military, work, training programs, self-directed study, and experience. As a faculty member, you will evaluate their learning to determine if it is equivalent to what your students learn in the classroom, at a passing level. The PLA methods available for you to choose from include:

Challenge Exams – These enable students to "test out" of the course. A challenge exam may also be used to address certain specific competencies for the course. Typically, the challenge exam is multiple choice and proctored in the Test Center.

- ✓ **Hands-On Practical Demonstrations** – These enable students to show what they can do to earn credit for the course. Students are required to demonstrate their competencies while you assess them. This is particularly useful for the "hands on" skills required in our Advanced Manufacturing courses.

- ✓ **Learning Portfolios** – These enable students to describe what they know and provide evidence (such as letters from their supervisors, videos, products and components they have designed and/or produced, etc.) to make a case for credit. Students must write a learning narrative (similar to a term paper) and provide documentation such as work products, videos, and letters of verification from a supervisor on company letterhead, for example. If students are successful in making their case by addressing every specified competency, then you can award credit for the course.

- ✓ **NIMS Certificates** – Some NIMS (National Institute of Metalworking Skills) Certificates prove mastery of some course competencies. If a student presents a NIMS certificate, it may be all you need to be assured the student has attained the required competencies for the certificate. When these competencies align with the course competencies, credit can be awarded.

Every Advanced Manufacturing course has a list of competencies that students are expected to master. These competencies are the ones that you will require students to demonstrate in order for them to earn credit for a course. As a faculty member, you will determine which PLA method or combination of methods will work best to showcase the student's knowledge and skills.

For example, *there are nine competencies for the* ***MAC 110 Introduction to Engine Lathe*** *course. The faculty has already determined that the student needs to take a challenge exam for five of the competencies. The remaining four competencies require the student to do a hands-on demonstration. If the student passes the exam (at a "C" grade or higher) and the hands-on demonstration, the student earns three credits for MAC 110.*

What are some examples of competencies?

Keeping with our example of **MAC 110 Introduction to Engine Lathe**, students are required to do the following to earn credit for this course:

EXAMPLES OF COMPETENCIES

Demonstrate these competencies by taking a Challenge Exam	**Demonstrate these competencies with a Hands-on Practical Demonstration**
☐ **Demonstrate** engine lathe safety ☐ **Identify** tool holders and tool holding for turning applications ☐ **Identify** all cutting tools for the lathe ☐ **Calculate** and machine 60-degree thread forms and various other threading operations ☐ **Calculate** and cut various types of tapers The student must pass this test before performing the hands-on practical demonstration. Notice that the verbs ***identify*** and ***calculate*** lend themselves to a written assessment such as the Challenge Exam required for this course.	☐ **Use** various types of lathe spindle tooling ☐ **Perform** facing and center drilling operations ☐ **Perform** turning between centers operations ☐ **Perform** special lathe operations, which will consist of drilling, boring reaming, knurling, recessing, parting, and tapping **Note:** Competencies that require students to ***demonstrate, perform, do, show, etc.*** are best assessed through a practical demonstration.

Demonstrate these competencies by taking a Challenge Exam	Demonstrate these competencies with a Hands-on Practical Demonstration
A portfolio is another PLA method that will work for competencies that require the student to ***identify, calculate, describe, analyze, summarize, etc.***	

Getting Started

Student Eligibility – Only students who are enrolled in an advanced manufacturing certificate or degree program are eligible to seek PLA credits. Students initiate the process by speaking with a program advisor. Students will be given an easy-to-complete *PLA Learning Claim Application* (see Appendix C).

To earn PLA credits, students must pass the assessment(s) with a "C" grade or higher. Rubrics should be used for portfolio and practical demonstrations.

Here is an example of a simple rubric that can be used for practical demonstrations:

Competency	Can Do	Not Yet	Comments
Comp. IV – Use various types of lathe spindle tooling	✓		
Comp. V – Perform facing and center drilling operations	✓		

If a student fails the assessment, no credit or "F" is reported or recorded on the transcript. The student must simply take the course. If the student passes the assessment, then the credit is recorded on the transcript accordingly.

Using the Advanced Manufacturing PLA Template - Faculty Worksheet

A **Faculty Worksheet** is included in this guide (see Appendix B), along an example of a completed worksheet (Appendix A). The worksheet is simple to use. Here's how:

1. Review the required competencies.

2. Determine if the competencies lend themselves to one form of PLA or if they require an additional form. For instance, for the MAC 110 course example, the faculty determined that it needed to be assessed via a challenge exam (multiple choice) and a hands-on practical demonstration. Some courses may better lend themselves to a portfolio and a hands-on demonstration. It is your decision as to how you want the student to demonstrate the competencies. Note the method or methods on the worksheet.

3. Once you have completed the worksheet and it is approved, please ensure the program advisors have copies of it to be able to accurately advise students who are interested in PLA for your course.

4. Determine when students may be assessed. For the MAC 110 course, students can only do PLA two weeks prior to any semester. A schedule should be posted for students. Challenge exams are computer-based delivered in one-hour blocks of time. Challenge exam test scores are immediately available after the student has tested. Plan for a two-hour block of time for the practical assessments. Portfolios are done by students on their own timeline. Assessing a portfolio generally takes no more than two hours.

The Student's Paperwork

When the student is deemed eligible for PLA by her/his program advisor, the student will be given a **Student PLA Learning Claim Application** and a copy of the approved Faculty Worksheet as a guide to prepare for the assessment(s). A copy of the Student PLA Learning Claim Application is at the back of this guide for your easy reference (see Appendix C).

Appendix A

Advanced Manufacturing PLA Template

Faculty Worksheet Example

Course Number and Name: MAC 110 Introduction to Engine Lathe
Circle One: ~~Associate Degree~~ Certificate ☐ *Electro-mechanical Engineering* ☐ *Engineering Graphics* ✓ Machining ☐ *Welding* ☐ *Other, please list here:* _____
Approved PLA methods for this course (Check all that apply): ☐ ~~Portfolio~~ ✓ Practical Demonstration ✓ Challenge Exam
The following competencies will be evaluated by **Portfolio Assessment:** Portfolio assessment is not available for this course. List competencies here, if applicable
The following competencies will be assessed by a **Practical Demonstration:** Students may complete the Practical Demonstration by choosing one of the two assessments described below. 1. Video, Letter of Verification, and presenting the component/product to the assessor for review. The video must be of high quality showing the student using the proper machines, tools, and equipment to make a component that encompasses the competencies listed below. The student will present the component to the assessor along with a Letter of Verification on company letterhead signed by the student's supervisor attesting to the student's competencies and skills.

Course Number and Name: MAC 110 Introduction to Engine Lathe

2. Practical Demonstration. The student will be provided materials, instructions, and access to equipment to demonstrate the competencies (listed below) for the faculty assessor in-person.

Competencies to be covered by the Practical Demonstration (in either video or via the in-person practical demonstration after successfully passing the Challenge Exam):

Comp IV – Use various types of lathe spindle tooling
Comp V – Perform facing and center drilling operations
Comp VI – Perform turning between centers operations
Comp VII – Perform special lathe operations, which will consist of drilling, boring, reaming, knurling, recessing, parting, and tapping
Comp VIII – Calculate and machine 60-degree thread forms and various other threading operations
Comp IX – Calculate and cut various types of tapers.

List competencies here, if applicable

The following competencies will be assessed by **Challenge Exam:**

Comp I – Demonstrate engine lathe safety
Comp II – Identify tool holders and tool holding for turning applications
Comp III – Identify all cutting tools for the lathe

Note: The student must take the Challenge Exam first. Upon passing the Challenge Exam, the student may then do the Practical Assessment.

List competencies here, if applicable

The following competencies may be met by a **NIM's Certification** (list certification and associated competencies below, if applicable):

TBD

Course Number and Name: MAC 110 Introduction to Engine Lathe
Assessment Requirements: *The student must take the Challenge Exam first. Upon passing the Challenge Exam, the student is approved to do the Practical Demonstration. Students must pass both competency-based assessments with a 70% or higher ("C" grade or higher) to earn credit for the course.* *Challenge Exams and Practical Demonstrations to earn credit for prior learning are only available two weeks prior to each semester. Students must contact their Program Advisor to initiate the process.*
Prior Learning Assessment Protocol approved by: John Q. Faculty, Division Chair Date: January 31, 2016 **Please ensure all program advisors have a copy of this worksheet to share with students seeking PLA credit for this course, upon approval.**

Appendix B

Advanced Manufacturing PLA Template

Faculty Worksheet

Course Number and Name:
Circle One: Associate Degree Certificate ☐ *Electro-mechanical Engineering* ☐ *Engineering Graphics* ☐ *Machining* ☐ *Welding* ☐ *Other, please list here:* _____
Approved PLA methods for this course (Check all that apply): ☐ Portfolio ☐ Practical Demonstration ☐ Challenge Exam ☐ Other
The following competencies will be evaluated by **Portfolio Assessment:** List competencies here, if applicable The following competencies will be assessed by a **Practical Demonstration:** List competencies here, if applicable The following competencies will be assessed by **Challenge Exam:** List competencies here, if applicable

Course Number and Name:
The following competencies may be met by a **NIM's Certification** (list certification and associated competencies below, if applicable):
Assessment Requirements: *The student must take the Challenge Exam first. Upon passing the Challenge Exam, the student is approved to do the Practical Demonstration. Students must pass both competency-based assessments with a 70% or higher ("C" grade or higher) to earn credit for the course.* *Challenge Exams and Practical Demonstrations to earn credit for prior learning are only available two weeks prior to each semester. Students must contact their Program Advisor to initiate the process.*
Prior Learning Assessment Protocol approved by: Date: **Please ensure all program advisors have a copy of this worksheet to share with students seeking PLA credit for this course, upon approval.**

Appendix C

Advanced Manufacturing PLA Student Learning Claim

Student Application for Prior Learning Assessment

Student Name/ID:
Course for which credit is being sought:
Circle One: Associate Degree Certificate ☐ *Electro-mechanical Engineering* ☐ *Engineering Graphics* ☐ *Machining* ☐ *Welding* ☐ *Other, please list here:* _____
Advanced Manufacturing Credits Completed and Applied to the Degree or Certificate Program:
General Education Credits Completed:
How many Advanced Manufacturing credits are you seeking with this Learning Claim:
Program Advisor Approval Signature:
Program Advisor Approval Expiration Date *(if appropriate):*
I understand that I am applying for credit for the knowledge and skills I have learned outside of the traditional college classroom. I will make a case for awarding credit to me by demonstrating my skills, describing how I learned them, and providing documentation (such as work samples, letter of verification from a supervisor or expert, a video, or other evidence of my college-level knowledge and skills). Credit is not guaranteed. I have talked with an academic advisor to make sure my request does not duplicate other courses I may have taken or will take as part of my program of study. *By signing here, I am acknowledging that I have read the above paragraph and that I understand that all of my work must be my own in keeping with the Academic Honesty policy. I also recognize that my written work will be checked for plagiarism by* ***turnitin.com*** *or other plagiarism detection software.*

Student Name/ID:
Student Signature: Date:

PART 1 – Employment/Work Experience

Are you currently employed? YES NO

If YES – Enter **Job Title** here, along with a brief description of your responsibilities, or upload your job description or resume here.
➢ How many years have you been working in this field?
➢ What is your immediate employment goal?
➢ What is your long-term employment goal?
If NO—Enter **Job Title** here for your previous position, along with a brief description of your responsibilities or upload your resume here.
➢ How many years of experience do you have?
➢ What is your immediate employment goal?
➢ What is your long-term employment goal?

Do you hold any current/valid Certifications or Licenses?

List certifications here that already carry ACE or NCCRS credit recommendations or that have already been evaluated by CCCS faculty and approved for credit. The student can check the ones s/he holds. Leave a few blank lines for the student to write in other certifications that may not have been evaluated yet.

- **Do you have any NIMS' certifications?**
- **Did you receive any machining training and experience in the military?**

Have you completed an apprenticeship or are you close to completing an apprenticeship? NO If YES, please check the appropriate box below:

- ☐ Four-Year Apprenticeship Program
- ☐ Minimum of two years into Apprenticeship content completion

If yes, for what trade/skill?

Part 2 – Education Plan

Do you plan to eventually earn a bachelor's degree?

- If YES, please list the name of the college or university here:

When do you expect to complete your associate degree or certificate program?

- ☐ 2015/2016 Academic Year
- ☐ 2016/2017 Academic Year
- ☐ 2017/2018 Academic Year
- ☐ 2018/2019 Academic Year
- ☐ 2019/2020 Academic Year
- ☐ 2020/2021 Academic Year
- ☐ Uncertain

Are you in the U.S. Military?

- Branch
- Occupation Specialty
- Special Schools or Training

Do you plan to eventually earn a bachelor's degree? ➢ If YES, please list the name of the college or university here:
Are you a Military Veteran? ➢ Branch ➢ Rank at Retirement ➢ Occupation Specialty ➢ Special Schools or Training

Part 3 – Course Selection

Please list the course or courses for which you are seeking credit, based upon your learning from the military, work experience, hobbies, self-directed learning, continuing noncredit education, or other learning sources. **Be sure to obtain your program advisor's approval before completing your Learning Claim.**

CCCS Course Number	CCCS Course Name	Course Description and/or upload Course Syllabus here	Basis for the Credit Claim	Documentation or Demonstration
Course #1	Course Title		Such as work experience	Choose from Written Portfolio or Demonstrate the Skill or Course Challenge Exam
Course #2				
Course #3				
Course #4				

Part 4 -- Student's Case for Credit

Faculty determines how you will be assessed: Challenge Exam, Hands-on Practical Demonstration and/or Portfolio.

Course #1	Challenge Exam (if available)	Student Narrative (Portfolio, if approved)	Student's Practical Demonstration and Documentation
		Student describes how	Student may upload a video

Course #1	Challenge Exam (if available)	Student Narrative (Portfolio, if approved)	Student's Practical Demonstration and Documentation
Student types in each competency as per the syllabus or this is "auto filled" from a database.	If the student is required to take a Challenge Exam for all or some of the competencies, s/he simply checks this column where appropriate.	s/he attained this competency here. If a demonstration or course challenge exam will accompany this narrative, then it can be brief. If this is a portfolio, this needs to be more specific with the Narrative aligned with the competencies.	and a letter of verification from an expert/authority/supervisor on this competency. The video must be of high quality and show the student using the equipment and tools necessary to demonstrate the skill. The student is still required to present the outcome/product of his/her work to the assessor for review. For a practical demonstration, the student seeks an individualized assessment from a faculty assessor using this form. The assessor would determine how best to assure the competency is met. Ideally, the faculty will decide in advance how to best assess this competency. They would list it here on the template. And, they would build a rubric to go with the assessment. If the student does a course challenge exam (if available), the student would do this in a proctored setting with the tools necessary.
Competency #1			
Competency #2			
Competency #3			
Competency #4			
Competency #5			

Course #1	Challenge Exam (if available)	Student Narrative (Portfolio, if approved)	Student's Practical Demonstration and Documentation
Competency #6			
Competency #7			
Competency #8			
Competency #9			
Competency #10			
Competency #11			
Student needs to list all of the competencies from the course syllabus. Ideally, these would load automatically from an Advanced Manufacturing Course database. However, it could be done manually.		Student compiles information for every competency in the course description.	Student provides accompanying documentation or does a demonstration for every competency. Competencies can be combined in the documentation if appropriate.

ASSESSMENT RESULTS
FOR OFFICE USE ONLY: To be completed by
Faculty Assessor and/or Division Chair

Date Received:

- ☐ Portfolio
- ☐ Request for Practical Demonstration/Assessment
- ☐ Request for Challenge Exam

Date Assigned to Assessor:

Date Assessed:

Assessment Outcome:

- ☐ Approved, Credit Awarded
- ☐ Credit Denied
- ☐ Other

ASSESSMENT RESULTS **FOR OFFICE USE ONLY:** To be completed by Faculty Assessor and/or Division Chair
Feedback for the student/Comments: _____ _____ _____ _____ _____ _____ _____
Assessor Signature/Date:
Approval Date: Upon approval, please submit this form to the Registrar for transcription.