

## COURSE ARTICULATION ANALYSIS

**John A. Logan College**

\_\_\_\_\_ **High School**

Course Title: MAC 155 Machine Tool Laboratory

Course Title(s): \_\_\_\_\_  
(As it appears on transcript)

Instructor(s) \_\_\_\_\_

Course length: \_\_\_ Full year \_\_\_ Semester \_\_\_ Other

Class meets: \_\_\_\_\_ Hours per day \_\_\_\_\_ Hours per week

Contact Hours: Lec. \_\_\_\_\_ Lab \_\_\_\_\_ 4Hrs. \_\_\_\_\_

Number of Credits: \_\_\_\_\_

Total Contact Hours: \_\_\_\_\_

Text(s) Used: \_\_\_\_\_

Text(s) Used: Machine Tool Practices 7<sup>th</sup> Ed. Kibbe, Neely, Meyer, White  
Recommendations:

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Required Grade: \_\_\_\_\_

### Course Competencies/Outcomes & Evaluation Methods

Outcome/Competencies	JALC			High School		
	Yes	No	Evaluation	Yes	No	Evaluation
1. Measure using precision measuring instruments (such as micrometers, gage blocks, small hole gages, telescoping gages, radius gages, & vernier angle protractor)						
2. Measure threads to tolerance using thread micrometer						
3. Measure threads to tolerance using thread wires						
4. Grinding square and parallel using surface plate & indicators						
5. Checking angles and surfaces using a height gage and indicator						
6. Set up accurate angles using a sine bar and gage blocks						

7. Calculate gage block stacks (using wear block & without wear block) for given angles						
8. Determine and produce holes for press fits to dowel pin applications						
9. Develop CNCmilling programs to produce component parts as required						
10. Assembly of multiple parts using appropriate fasteners as required						
11. Download part programs via CAM software into a CNC machine						
12. Set-up tooling and indicate program reference zero (PRZ) on a CNC machine						
13. Employ grinder safety guidelines						
14. Perform grinder care and maintenance						
15. Select and apply cutting fluids						
16. Inspect and ring-test grinding wheels						
17. Balance grinding wheel						
18. Grind workpiece on magnetic chuck using power feed						
19. True and dress machine tool grinding wheel						

Code

O = Observation                      P = Projects                      PF = Portfolio  
W = Written Assignment            T = Test                              PR = Presentation  
S = Skills/Practicum                R = Research Paper                LA = Lab Assignment

JALC Instructor's Signature:	High School Teacher's Signature:
JALC Associate Dean Signature:	Regional System Director's Signature:
Date:	Date: