



## COURSE OUTLINE: MAC300 - APPLIED TRADE CALC

Prepared: Peter Corbett

Approved: Corey Meunier, Chair, Technology and Skilled Trades

<b>Course Code: Title</b>	MAC300: APPLIED TRADE CALCULATIONS
<b>Program Number: Name</b>	6347: GENERAL MACHINIST L3
<b>Department:</b>	MECHANICAL TECHNIQUES PS
<b>Semesters/Terms:</b>	21F, 21F, 22F
<b>Course Description:</b>	This course is designed to provide Level III General Machinist Apprentices the ability to solve problems involving oblique triangle, law of sines, law of cosines/cotangents, and compound angles.
<b>Total Credits:</b>	4
<b>Hours/Week:</b>	2
<b>Total Hours:</b>	36
<b>Prerequisites:</b>	There are no pre-requisites for this course.
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Essential Employability Skills (EES) addressed in this course:</b>	EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 11 Take responsibility for ones own actions, decisions, and consequences.
<b>Course Evaluation:</b>	Passing Grade: 50%, D  A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	Other Course Evaluation Requirements: Smart watches, smart phones and similar devices are not allowed during tests or quizzes and must be removed.  Grade Definition Grade Point Equivalent A+ 90 - 100% 4.00 A 80 - 89% B 70 - 79% 3.00 C 60 - 69% 2.00 D 50 - 59% 1.00 F (Fail)49% and below 0.00 CR (Credit) Credit for diploma requirements has been awarded. S Satisfactory achievement in field /clinical placement or non-graded subject area. U Unsatisfactory achievement in field/clinical placement or non-graded subject area. X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course. NR Grade not reported to Registrar's office.

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2021-2022 academic year.



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W Student has withdrawn from the course without academic penalty.

**Books and Required Resources:**

Technology Of Machine Tools by Steve F. Krar, Arthur R. Gill, Peter Smid, Robert J. Gerritsen  
Publisher: McGraw - Hill Edition: 8  
ISBN: 9781260565782

Mathematics for Machine Technology by Peterson and Smith  
Edition: 7th  
ISBN: 978-1-133-28145-0

**Course Outcomes and Learning Objectives:**

<b>Course Outcome 1</b>	<b>Learning Objectives for Course Outcome 1</b>
1. Solve trade-specific problems involving oblique triangles and solve for unknown values. (9 hrs)	1.1 Describe an oblique triangle. 1.2 Calculate the values of the unknown sides of oblique triangles.
<b>Course Outcome 2</b>	<b>Learning Objectives for Course Outcome 2</b>
2. Solve trade-specific problems involving the law of sines and solve for unknown values. (9 hrs)	Describe law of sines. 2.1 Calculate the values of unknown sides and angles of oblique triangles using the law of sines: <ul style="list-style-type: none"><li>• values of two angles and one side</li><li>• values of two sides and one angle</li></ul>
<b>Course Outcome 3</b>	<b>Learning Objectives for Course Outcome 3</b>
3. Solve trade-specific problems involving the law of cosines and cotangents and solve for unknown values. (9 hrs)	3.1 Describe the law of cosines and cotangents. 3.2 Calculate the values of the unknown sides and angles of oblique triangles using the law of cosines and cotangents: <ul style="list-style-type: none"><li>• values of two sides and the included angle</li><li>• values of three sides</li></ul>
<b>Course Outcome 4</b>	<b>Learning Objectives for Course Outcome 4</b>
4. Solve trade-specific problems involving compound angles. (9 hrs)	4.1 Describe compound angles. 4.2 Calculate the values of compound angles for tilt and rotation.

**Evaluation Process and Grading System:**

<b>Evaluation Type</b>	<b>Evaluation Weight</b>
Assignments	20%
Final Test	30%
Midterm Test	30%
Quizzes	20%

**Date:**

August 13, 2021

**Addendum:**

Please refer to the course outline addendum on the Learning Management System for further

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