



## COURSE OUTLINE: MAC106 - METAL CUTTING

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<b>Course Code: Title</b>	MAC106: METAL CUTTING SAW TECHNOLOGY
<b>Program Number: Name</b>	6345: GENERAL MACHINIST
<b>Department:</b>	MECHANICAL TECHNIQUES PS
<b>Academic Year:</b>	2024-2025
<b>Course Description:</b>	Upon successful completion the apprentice is able to use metal cutting saws to cut and shape workpieces.
<b>Total Credits:</b>	1
<b>Hours/Week:</b>	6
<b>Total Hours:</b>	6
<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>	<p>EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.</p> <p>EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication.</p> <p>EES 3 Execute mathematical operations accurately.</p> <p>EES 4 Apply a systematic approach to solve problems.</p> <p>EES 5 Use a variety of thinking skills to anticipate and solve problems.</p> <p>EES 6 Locate, select, organize, and document information using appropriate technology and information systems.</p> <p>EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.</p> <p>EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others.</p> <p>EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.</p> <p>EES 10 Manage the use of time and other resources to complete projects.</p> <p>EES 11 Take responsibility for ones own actions, decisions, and consequences.</p>
<b>Course Evaluation:</b>	<p>Passing Grade: 70%, B</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>
<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.  
 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: 9th  
 ISBN: 9781266277474

Technology of Machine Tools Student Workbook by Steve F. Krar, Arthur R. Gill, Peter Smid  
 Publisher: McGraw Hill Edition: 9th  
 ISBN: 9781266321054

**Course Outcomes and Learning Objectives:**

Course Outcome 1	Learning Objectives for Course Outcome 1
1.1 Demonstrate safe working procedures when setting up and operating metal cutting saws.	
Course Outcome 2	Learning Objectives for Course Outcome 2
1.2 Describe functions and operating principles of vertical and horizontal bandsaws. (0.5 hrs)	
Course Outcome 3	Learning Objectives for Course Outcome 3
1.3 Select saw workholding devices and set-up accessories. (0.5 hrs)	
Course Outcome 4	Learning Objectives for Course Outcome 4
1.4 Describe vertical and horizontal band saws. (0.5 hrs)	
Course Outcome 5	Learning Objectives for Course Outcome 5
1.5 Describe preparation of a metal cutting saw blade. (0.5 hrs)	
Course Outcome 6	Learning Objectives for Course Outcome 6



	1.6 Develop a plan for sawing. (0.5 hrs)	
	<b>Course Outcome 7</b>	<b>Learning Objectives for Course Outcome 7</b>
	1.7 Describe installation and testing procedures for vertical and horizontal bandsaws. (1 hr)	
	<b>Course Outcome 8</b>	<b>Learning Objectives for Course Outcome 8</b>
	1.8 Perform sawing. (2 hrs)	
	<b>Course Outcome 9</b>	<b>Learning Objectives for Course Outcome 9</b>
	1.9 Perform routine maintenance. (0.5 hrs)	
<b>Evaluation Process and Grading System:</b>	<b>Evaluation Type</b>	<b>Evaluation Weight</b>
	Practical	60%
	Quizzes and tests	40%
<b>Date:</b>	August 19, 2024	
<b>Addendum:</b>	Please refer to the course outline addendum on the Learning Management System for further information.	