

SYLLABUS

DIVISION: Business & Engineering Technologies

CURRICULA IN WHICH COURSE IS TAUGHT: MAC Machine Lab 1

COURSE NUMBER/TITLE: MAC 131

CREDIT HOURS: 2 HOURS

WEEK LECTURE: 1

HOURS/WEEK LAB: 3

I. COURSE DESCRIPTION: bench work, measuring tools, drill press, lathe, and milling machine operations. Emphasizes turning, facing, drilling, boring, reaming, tapering and threading.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES:

- Choose proper manufacturing processes and materials.
- Possess rudimentary machining skills.
- Interpret mechanical blueprints.
- Demonstrate knowledge of safety practices and consistently execute them.
- Apply math and calculation skills to solve technological problems.

III. REQUIRED BACKGROUND/PREREQUISITES:

None

IV. COURSE CONTENT:

- Shop Safety – air, oil, electricity, cutters, eye and ear hazards, lifting, and power machinery
- Measurement instruments and layout
- Blueprint reading
- Material and lubricant selection
- Drill press operations
- Taps and dies
- Saws, grinders and sanders
- Introduction to lathes
- Precision measurement
- Press fits
- Milling machines

V. THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE

NOTE: The syllabus and course outline are subject to change at the discretion of the professor.

ADDRESSED IN THIS COURSE

(Place X by all that apply)

_____ Communications

_____ Computational Skills and _____ Computer Skills **X**

X _____ Learning Skills Society

_____ Understanding Culture/

_____ Critical Thinking

_____ Understanding Technology **X** _____ Science and

_____ Interpersonal Skills and Human Relations

_____ Wellness

VI. LEARNER OUTCOMES

VII. EVALUATION

<p>Learner outcome</p> <ul style="list-style-type: none"> Utilize scales, micrometers, calipers, and dial indicators to measure with accuracy to .001 inch. 	<p>Evaluation method</p> <p>Lab exercises Online test</p>
<p>Learner outcome</p> <ul style="list-style-type: none"> Interpret blueprints and drawings of projects to be created in an industrial environment. 	<p>Evaluation method</p> <p>Lab exercises In class assignments</p>
<p>Learner outcome</p> <ul style="list-style-type: none"> Demonstrate an understanding of the terms and procedures used in a machine shop. 	<p>Evaluation method</p> <p>Lab exercises In class assignments Online test</p>
<p>Learner outcome</p> <ul style="list-style-type: none"> Demonstrate an ability to center, turn, face, chamfer, part, knurl, drill, bore, taper, thread and file on an engine lathe. 	<p>Evaluation method</p> <p>Lab exercises</p>
<p>Learner outcome</p> <ul style="list-style-type: none"> Demonstrate ability to mill, drill, tap, countersink, and counterbore on a vertical mill. 	<p>Evaluation method</p> <p>Lab exercises</p>
<p>Learner outcome</p> <ul style="list-style-type: none"> Understand basic shop techniques while incorporating shop safety practices. 	<p>Evaluation method</p> <p>Lab exercises In class assignments Online test</p>

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