

Washtenaw Community College Comprehensive Report

MTT 102 Machining for the Technologies Effective Term: Spring/Summer 2017

Course Cover

Division: Advanced Technologies and Public Service Careers

Department: Industrial Technology

Discipline: Machine Tool Technology

Course Number: 102

Org Number: 14440

Full Course Title: Machining for the Technologies

Transcript Title: Machining for the Technologies

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: Three Year Review / Assessment Report

Change Information:

Consultation with all departments affected by this course is required.

Course title

Course description

Distribution of contact hours

Outcomes/Assessment

Objectives/Evaluation

Rationale: Update master syllabus as a result of course assessment.

Proposed Start Semester: Spring/Summer 2017

Course Description: This course provides an introduction to basic machine tool operations. Emphasis is placed on shop safety. Topics covered include: inch and metric precision measurement tools, tool identification, cutting speed calculations, drilling and tapping. Lab projects cover the basic operation of contour band saw, vertical milling machine and turning on lathe.

Course Credit Hours

Variable hours: No

Credits: 2

Lecture Hours: Instructor: 15 Student: 15

Lab: Instructor: 45 Student: 45

Clinical: Instructor: 0 Student: 0

Total Contact Hours: Instructor: 60 Student: 60

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Recognize safety rules and safe work practices in machine shop.

Assessment 1

Assessment Tool: department tests (Blackboard)

Assessment Date: Winter 2019

Assessment Cycle: Every Three Years

Course section(s)/other population: all

Number students to be assessed: all

How the assessment will be scored: Answer key

Standard of success to be used for this assessment: 80% of students must score 100% on the safety quizzes before the due date.

Who will score and analyze the data: Departmental faculty

2. Perform precision measurements with dial calipers.

Assessment 1

Assessment Tool: Measuring Exercise

Assessment Date: Winter 2019

Assessment Cycle: Every Three Years

Course section(s)/other population: all

Number students to be assessed: all

How the assessment will be scored: This will be scored using a departmentally-developed rubric.

Standard of success to be used for this assessment: 75% of the students will score 85% or higher.

Who will score and analyze the data: Departmental faculty

3. Setup and safely operate the band saw, vertical mill and lathe.

Assessment 1

Assessment Tool: Capstone project including the parts and the assembled product

Assessment Date: Winter 2019

Assessment Cycle: Every Three Years

Course section(s)/other population: all

Number students to be assessed: all

How the assessment will be scored: Departmentally-developed rubric for the bezel, the legs and the assembled product.

Standard of success to be used for this assessment: 85% of the students will score 80% or higher.

Who will score and analyze the data: Departmental faculty

Course Objectives

1. Recognize and demonstrate safe shop practices.
2. Perform precision measurements using dial calipers and a micrometer.
3. Identify measuring tools, work piece holding tools, milling tools and lathe turning tools.
4. Operate a metal cutting band saw.
5. Change tools on the vertical mill.
6. Perform peripheral milling, drilling, slot milling and face milling on the vertical milling machine.
7. Set the digital readout to zero position on the vertical milling machine using the jump edge finder.
8. Setup lathe tool post for turning operations.
9. Operate the lathe to perform facing, drilling, turning, chamfering, taper turning, grooving and parting.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Jeffrey Donahey</i>	<i>Faculty Preparer</i>	<i>Aug 25, 2016</i>
Department Chair/Area Director: <i>Thomas Penird</i>	<i>Recommend Approval</i>	<i>Aug 27, 2016</i>
Dean: <i>Brandon Tucker</i>	<i>Recommend Approval</i>	<i>Oct 03, 2016</i>
Curriculum Committee Chair: <i>David Wooten</i>	<i>Recommend Approval</i>	<i>Nov 28, 2016</i>
Assessment Committee Chair: <i>Michelle Garey</i>	<i>Recommend Approval</i>	<i>Dec 06, 2016</i>
Vice President for Instruction: <i>Bill Abernethy</i>	<i>Approve</i>	<i>Dec 06, 2016</i>