Pop Up Class – Advanced Lathe

1. Class Overview
   o Description
     This class will enable the student to describe and perform the more complex Lathe machine operations
   o Prerequisites
     Shop Safety, Basic Lathe, Intermediate Lathe
   o Anticipated Class Size – 10 max
   o Class Duration – 1 ½ hours
   o Material Needed
     None

2. Safety
   Machine Shop dress code and safety glasses

3. Educational Objectives
   o Students will be able to:
     ▪ Cut an angle using the compound
     ▪ Use a part off tool
     ▪ Cut a groove
     ▪ Thread a part

4. Class Format
   o Pre-Class activity
     i. None
   o In-Class activity
     i. Cut an angle using the Compound
        1. Compound set up
        2. Procedure for cutting angles
     ii. Use a part off tool
        1. Setting tool post for part off tool
        2. Feeds and speeds for Part off
        3. Part off procedures
     iii. Cut a Groove
1. Tool selection
2. Setting tool post for cutting a groove
3. Feeds and speed For grooving
4. Groove cutting procedures

iv. Thread a part
1. Tool selection
2. Setting tool post for threading
3. Feed and speeds for Threading
4. Threading procedures

v. Activity
   o Cut an angle using the compound
   o Use the part off tool
   o Cut a groove
   o Thread a part

vi. Assessment
   o Cut an angle to within 1 degree of drawing angle
   o Part off a part to within .005 of part length
   o Cut a groove to within ±.005 o.d. size and length
   o Thread a part

5. Evaluation
   o Students fill out an evaluation on the content, learning objectives, and instructor.