Pop Up Class – Intermediate Mill

1. Class Overview
   - Description
     This class will describe the proper set-up of a milling machine for various milling machine operations
   - Prerequisites
     Shop Safety, Basic Mill
     - Anticipated Class Size – 10 max
   - Class Duration – 1 ½ hours
   - Material Needed
     None

2. Safety
   Machine Shop dress code and safety glasses

3. Educational Objectives
   - Students will be able to:
     - Align the vertical Head
     - Align a vise
     - Mill a Part flat
     - Mill a Part Square

4. Class Format
   - Pre-Class activity
     - None
   - In-Class activity
     - Alignment of the vertical head
       - Indicator set up
       - Procedure for alignment
     - Alignment of a vise
       - Indicator set up
       - Procedure for Alignment
iii. Mill a part flat  
   1. Mounting the work piece  
   2. Select the proper cutting tool  
   3. Set the proper spindle speed  
   4. Machine the surface  

iv. Squaring a part  
   1. Mounting the work piece  
   2. Procedures for squaring a part  

v. Activity  
   o Align the vertical head  
   o Align a vise  
   o Mill a part flat  
   o Mill a part Square  

vi. Assessment  
   o Align the vertical Head to within .001  
   o Align the vise to within .001  
   o Mill a part flat  
   o Mill a part square  

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