

# Modesto Junior College

## Machine Tool Technology Advisory Committee Minutes

### October 25<sup>th</sup>, 2016

Meeting called to order at 8:20 AM.

In Attendance: Corey Gerson (Fastenal Manufacturing), Tom Brumley (Grace Davis High School), Kevin Walker (Gallo), Dennis Lucas (G3 Industries), John Beam (Racor), Jim Selway (CNC Solutions), Raj Panjabi (Training Concepts Americas).

**Old Business: None**

**New Business:**

**A. Report on the status of program at Davis High School**

-Tom Brumley reported that he was teaching 3 wood shop classes, including Ag Carpentry, and 2 metal shop classes.

-Davis High School also received a CTE Grant awarding Tom's classes in over \$100,000 in new investments. With these funds, the school had purchased a Tormach CNC lathe, a 3D printer, a laser for the wood shop, and a Trak Mill and Trak Lathe have also been requested.

**B. MJC enrollment report by Randy Thoe:**

-Enrollment was reported as down in the Machine Tool Program due to Mach 302 (Machine Shop 2) and Mach 357 (Blueprint Reading) not being offered Fall Semester. With the additional adjunct instructors, these classes will once again be offered in the near future.

	F 16	SP 16	F 15	SP 15	F 14	SP 14	F 13	SP 13	F 12	SP 12	F 11	SP 11	F 10	SP 10	F 09	SP 09	F 08	SP 08	F 07	SP 07	F 06	SP 06	F 05
<b>Day Manual (14, 8, 10)</b>	32	25	36	34	40	41	38	41	33	33	36	37	34	33	37	30	26	24	28	18	14	19	14
<b>Night Manual (21, 3)</b>	24	45	39	43	41	35	31	29	29	32	28	30	29	24	31	28	22	32	32	26	27	24	33
<b>CNC Programming &amp; Blueprint</b>	23	18	22	0	26	17	20	25	34	29	31	27	29	27	27	28	16	21	13	17	23	22	22
<b>No Blueprint</b>		13	15	12	14	24	20	25	20			16	9	14	13	10	9	15	3				
<b>CNC Operations</b>	10	12	5	7	11	7	9	6	17	10	18	10	10	6	15	12	12	9	4	7	5	13	10
<b>Independent Study</b>	4	7	4	8	2	5	4	4	5	5	6	8	2	5	3	11	13	13	14	3	14	14	11
<b>Total</b>	<b>93</b>	<b>120</b>	<b>121</b>	<b>104</b>	<b>134</b>	<b>129</b>	<b>122</b>	<b>130</b>	<b>138</b>	<b>109</b>	<b>119</b>	<b>128</b>	<b>113</b>	<b>109</b>	<b>126</b>	<b>119</b>	<b>94</b>	<b>114</b>	<b>94</b>	<b>81</b>	<b>83</b>	<b>92</b>	<b>90</b>

**C. Additional Adjunct Instructors**

-The Machine Tool Program has added 2 new adjunct instructors to the staff. They are: Robert Bates and Kenneth Morrison. Both are former students and are currently working in industry. The addition of these two instructors will bring additional depth to program and give students another perspective from industry. Both Robert and Kenneth are helping out this Fall and will be teaching their own classes beginning Spring of 2017.

-A Lab Tech has also been approved for the Machine Tool Program. This would be a part time role (19 hrs per week) consisting of aiding and mentoring students in the laboratory environment. Any inquiries should be sent to Randy Thoe. This position will be posted in the next month.

**D. Planned MJC Class schedule for Spring 2017**

- Spring 2017 the Machine Tool Program will be offering the following classes: MACH 211DE, MACH 213, MACH 301, MACH 301 Academy, MACH 302, MACH 218, MACH 219, and MACH 222.
- Robert Bates will begin teaching the Mach 301 class which is an Introduction to Machining Class.
- Kenneth Morrison will be teaching the Mach 222 class which is an Introduction to CNC Class primarily focused on CNC Operations and Setup.

**E. MACH 220 CNC Machine Tool Programming Update**

-Modesto Junior College has now purchased 15 seats of Mastercam 2017. The committee was very excited with this software update, because it is one of the most common programming software's in industry and has ample resources and technical support available. This will be the software that will replace FeatureCam, which was previously taught in the Mach 220 (Machine Tool Programming) course. With the addition of this software, the Machine Tool Program will be offering the Mach 220 course in Fall 2017.

**F. MACH 218, 219 Intro to CNC Programming Lathe and Mill Update**

-To strengthen the CNC portion of the Machine Tool Program, MJC is now offering the Mach 218 (Intro to CNC Lathe Programming) and Mach 219 (Intro to CNC Mill Programming) courses on separate nights. Previously, these classes were taught simultaneously which hindered one on one instructor time for the student. Additionally this fall, we have had extra help in both of these classes from Robert Bates and Kenneth Morrison.

**G. Curriculum Update Spring 2017**

- In the Spring of 2017 the Machine Tool Program will be updating its entire curriculum. The goal of this update is to streamline the certificates and degrees available to students and create a clearer pathway to a job in industry.
- Committee members are welcome to bring any ideas, needs or concerns forward to be addressed in this update. Feedback is encouraged.
- A few proposed changes are to update the Mach 218 and Mach 219 courses from 2 credits to 3 credits and to eliminate redundancy in course content between Mach 211 and Mach 301.
- The committee suggested it would be advantageous for them to be able to see the amount of lab hours a student acquired in each of the classes and certificates. This would help them in the hiring process confirming how well rounded the student was upon completion.

**H. Haas Mini Mill**

-Had an open discussion about moving the Haas Mini Mill from Sierra Hall to Ansel Adams. The problem with this move would be the space needed for the machine does not exist in Ansel Adams at the current time. The consensus was to leave the Mini Mill in Sierra for the time being, until additional space was available.

**I. Equipment Needs**

-The committee suggested adding a virtual software to aid in the training of students in the CNC classes. This software could be used in combination with the current Haas Simulators and actual CNC Machines. This software could benefit the Mach 218 and Mach 219 courses as well as aid in the Mach 220 course.

-The committee suggested that with the addition of the Fanuc control on the new Doosan Lathe, that possibly a Fanuc Simulator could aid in the use and training of that specific machine. Fanuc is widely known as the universal CNC control system.

#### **J. Equipment Report**

- a. The Brown and Sharp CMM has been repaired and is working well.
- b. All other shop equipment is in good working order.

#### **K. Other Business**

- a. Fastenal Manufacturing donated a Doosan Lynx 220 LM CNC Lathe to the Machine Tool Program in August 2016. This machine utilizes a Fanuc Control and has a tailstock and live tooling. These capabilities open up some new training possibilities for now, and the future for the program. The committee welcomed this addition and it was mentioned that 40% of all new CNC Lathes sold, now incorporate live tooling making this machine very current to industry trends.
- b. G3 Industries (Closure Division) donated bar stock, a Sunnen Hone, an Acra Tool Grinder, and a Super Tec Cylindrical Grinder to the program early this fall. The bar stock was shared between the machine shop and the welding department, the Sunnen Hone will be used in the Automotive Department, and the two grinders will be used in trade with Performance Machine Tools for credit towards additional shop equipment.
- c. Bob Lee from Bob Lee Products donated some additional tooling, collets, and supplies to the program in October 2016.
- d. The Romi/Bridgeport Toolroom Lathe was sold in September for \$8,000 to make space for the new Doosan Lathe. These proceeds will come back to the Machine Tool Program's Fund 12 "Projects" account. The current Projects account balance is now at around \$24,000.
- e. In July 2016 Randy Thoe attended the national HTEC conference in Maine. In October 2016 Randy Thoe also attended the local HTEC conference at DeAnza College in Cupertino. Both of conferences are sponsored by Haas and bring local educators and vendors in the machine tool industry together to network and share industry and technology updates.
- f. October 2016 Sandvik Coromant presented a Milling seminar and demonstration for students in the Machine Tool Program.
- g. A CTE Perkins Grant has been funded allowing the Machine Tool Program to add additional Static and Live Tool Holders to the Doosan Lathe. This additional tooling will allow us to demonstrate the true capabilities of this machine.