

**Fullerton College
Manufacturing Technology
Machine-Metrology-Automated Technology Advisory Committee**

Agenda

Fullerton College Manufacturing/Machine/Metrology/Automated Technology

321 E. Chapman Ave.

Fullerton, CA 92832

Friday May 10th, 2024, 3:00pm to 4:30pm

Room 728 in 700 building

- **Welcome and Introductions:** Dan O'Brien, Department Coordinator
- **Department Update:** Dan O'Brien/ George Bonnard, Faculty
- **Apprenticeship Program**
- **New and On-Going Department Grants**
- **New Curriculum/Courses/Certificates**
- **New Potential Curriculum**
- **New Equipment/Software**
- **Future Staffing and Space Requirements**
- **Donations**
- **Student Recruitment and Conference Activities**
- **Round Table Discussion**
- **Department Motions**
- **Committee Members**

Proposed Discussion Items

Department Update: (Note: Items will be discussed at varying levels of detail)

Apprenticeship Programs:

- Number of cohorts currently enrolled -we have 1 cohort of 2 students at this time.
- New Machinist Cohorts from CTMAA (California Tooling Machining Apprenticeships Association)-Update on cohorts (2 individuals from Keysight Inc.) started Fall 2021. One cohort (1 student from Keysight) started Fall 2022.

New and On-Going Department Grants:

- Strong Workforce Initiative Funding for Precision Machining and Metrology. No new funding has been requested this past year however funding may be requested for 2024-2025 academic year.
- VTEA Funding-No new funding has been requested this past year however funding may be requested for 2024-2025 academic year.

Study Abroad Program:

- First Study Abroad course (TECH 108F-Manufacturing Processes) for the Technology and Engineering Division to be offered this summer (2024) from June 10th to July 20th. Course is full at this time.

New Curriculum/Courses/Certificates -Review of Courses and Programs (Unit Revision, Descriptions, SLOs, Objectives, Course Content/Outlines, Textbook, etc.):

- Machine Technology Level I is State approved as of Fall 2018
- Machine Technology Level II is State approved as of Fall 2019
- Manufacturing Technology A.S. degree is State approved as of Fall 2019
- Mastercam Certificate is approved as of Fall 2018-Revised 2022 to include MACH 151 F
- Surfcam Certificate is approved as of Fall 2018-In process of being revised
- CNC certificate is State approved as of Fall 2019
- CNC Operator Certificate-revised certificate is State approved as of February 2021
- Conversational Programming Certificate is State approval as of October 2021
- Mini-Metrology Certificate is State approved as of February 2021.
- Metrology Certificate is State approved as of April, 2019
- Swiss Lathe Certificate is State approved as of April 2019
- Electro-Mechanical Technician Certificate-is State approved as of Fall 2021
- Automation Fundamentals Certificate-is State approved as of Fall 2022
- Industrial Maintenance Certificate-is State approved as of April 2019
- Engineering Technology Certificate-is State approved as of October 2021
- Industrial Technology AS-is State approved as of April 2019 and currently under revision
- Theme Park Technology Specialist is State approved as of July 2020
- Fusion 360 course-Mach 157 F has been approved but not offered as of yet.
- All Machine/Metrology Technology courses are now completely revised as Level-100 or higher and are State approved. See Table 1 and 2
- All courses have been reviewed to determine whether courses can be taught online/hybrid or not. Most courses can be taught Hybrid with only a few that can be taught totally on-line. Some courses in the Machine Technology and Technology departments simply cannot be taught in a hybrid or on-line fashion. Courses in the Machine, Metallurgy, and Technology are encouraged to be taught in person. As of Spring 2023 most course have returned to normal in person classes.
- As of March of 2024, the courses and programs in the Machine Technology department and some of the courses and programs in the Technology department will commence

and undergo a 2-year/6-year review process as requested by the State for updating and accreditation.

- Members to review Courses and Programs for Descriptions, Objectives, Student Learning Outcomes (SLOs), Textbooks, Course Content, Methods of instruction, Methods of evaluation, etc. for all courses/programs per handout material. See Table 1, 2, 3, and 4.

Note: See addendum materials (Zip files) for Programs and Courses (below) which have been emailed to all participants.

Table 1-Machine/Metrology Technology related courses (** in front of the course name indicates courses have been reviewed/revised for online/hybrid instruction and/or other changes as deemed necessary by faculty.)

**MACH 101 F Introduction to Machine Tools *Active*	**MACH 110 F CNC Machine Set-Up and Operation *Active*	**MACH 142 F Advanced CNC Swiss Style Lathe Set-up and Operation *Active*	**MACH 157 F Computer-Aided Manufacturing *Active*
**MACH 102 F Intermediate Machine Tools *Active*	**MACH 115 F CNC Parts Programming *Active*	**MACH 145 F Basic CNC Swiss Style Lathe Programming and Applications *Active*	**MACH 180 F Introduction to Metrology *Active*
**MACH 103 F Advanced Machine Tools *Active*	**MACH 116 F Machine Tools *Active*	**MACH 150 F CNC Programming Using Mastercam *Active*	**MACH 182 F Introduction to CMM Inspection and Romer Arms *Active*
**MACH 104 F Advanced Topics in Machine Technology *Active*	**MACH 120 F Advanced CNC Machining *Active*	**MACH 151 F Mastercam Lathe "Pending State approval"	**MACH 184 F Advanced CMM and Romer Arm Inspection *Active*
**MACH 105 F Conversational Programming I *Active*	**MACH 130 F Multiple Axis CNC Set and Operation *Active*	**MACH 152 F Advanced CNC Programming Using Mastercam *Active*	**MACH 185 F CMM and Romer Arm Applications *Active*
**MACH 106 F Conversational Programming II *Active*	**MACH 140 F Basic CNC Swiss Style Lathe Set-up and Operation *Active*	**MACH 154 F CNC Programming Using Surfcam *Active* Pending changes.	**METL 192 F Metallurgy *Active*
		**MACH 156 F Advanced CNC Programming Using Surfcam *Active* Pending changes	

Table 2-Technology Related Courses (** in front of the course name indicates courses are to be revised for online/hybrid instruction and/or other changes as deemed necessary by faculty.)

**TECH 081 F Technical Mathematics I *Active*	**TECH 108 F Manufacturing Processes *Active*	**TECH 135 F Introduction to Programmable Logic Controllers *Active*	**TECH 199 F Technology and Engineering Independent Study I *Active*
**TECH 082 F Technical Mathematics II *Active*	**TECH 127 F Industrial Safety *Active*	**TECH 136 F Computer Integrated Manufacturing and Advanced PLC *Active*	
**TECH 088 F Technical Science *Active*	**TECH 131 F Basic Electricity and Basic Electronics *Active*	**TECH 137 F Electronic Instrumentation and Networking *Active*	
**TECH 101 F Introduction to Technology *Pending*	**TECH 132 F Basics of Electric Motor Controls *Active*	**TECH 138 F Electronic Instrumentation and Networking II *Active*	

Table 3-Machine Technology Related Programs (** in front of the Program name indicates program may be revised for Unit revision, Description, Student Learning Outcomes (SLO) and/or other changes as deemed necessary by faculty.)

**CNC Operator Certificate	**Conversational Programming Skills Certificate	**Manufacturing Technology AS Degree	**Metrology Mini Skills Certificate
**Computer Aided Manufacturing (CAM)*	Machine Technology Level I Certificate	**Mastercam Certificate* and New Mastercam Certificate for Multi-Axis	**Surfcam Skill Certificate-Pending changes
**Computer Numerical Control (CNC) Certificate	**Machine Technology Level II Certificate	**Metrology Certificate	**Swiss Lathe Certificate

Table 4-Technology Related Programs (** in front of the Program name indicates program may be revised for Unit revision, Description, Student Learning Outcomes (SLO) and/or other changes as deemed necessary by faculty.)

**Automation Fundamentals Certificate	**Industrial Maintenance Technician Certificate	**Theme Park Technology Specialist Certificate
**Electro-Mechanical Technician Certificate	**Industrial Technology AS*	**Engineering Technology Certificate

Vote: All in favor of changes to items above in Table 1, 2, 3, and 4

New Potential Curriculum

- **Mastercam Multi-Axis certificate**
 - Creation of a new course MACH XXXF for 4-5 axis programming. New certificate would include MACH 150F; MACH 151F; MACH 152F; MACH 157F; and new MACH XXXF. Vote.
- **Open for discussion**

New Equipment/Software:

- **Open for discussion**

Future Staffing and Space Requirements:

- Additional space is needed for equipment (Romer arms) and Inspection Workstations. Another Instructor is needed to teach the Metrology Program and other disciplines. This request has been put into the Program Review for approval.

Donations:

- Gene Haas Scholarship- \$17,000-for year 2023-2024
- CAM Tooling Association Scholarship-\$1500
- Horatio Alger Association-\$2500
- Master Chemical/Coast Industrial’s donations include—Trim Sol Microsol 585xt Coolant, oils, cleaners, and cutting tools.
- Esprit Software-CAD/CAM software

Student Recruitment and Conference Activities:

- Machine Technology Facebook Page
- Fullerton College Machine Technology LinkedIn Page
- Technology and Engineering Website-revised
- START event-July 2023

- Mfg. day-October 2023
- AUHSD Annual College and Career Fair October 2023.
- Loara High School-Winter Fest event-December 2023
- CTE Celebration Month-February 2024-Whittier High School
- California High School Career Day-February 2024
- Future Hornet Days-Vital link -March 2024
- HTEC conference-March 2024-hosted conference with 174+ attendees
- Jump Start Program-High School tours-February 2024 through May 2024.

Round Table Discussion

- **Directed by Faculty**

- **Committee Members request and comments (Open forum)**

Meeting Minutes

The following a brief summary of the meeting minutes for the May 10th Machine-Metrology and Automated Technology Advisory Committee Meeting.

https://fullcoll-edu.zoom.us/rec/share/VvND_rG6CABCBjXADTc_QJDK89XZ-x-dVM4tqT6G8jCP1TzIY7q3Ch3_l6UIMz_.qqGNt2sOgVFTBIJh

Please note that zip files containing the courses and programs for Machine Technology and the Technology department were emailed (on April 10th, 2024) to committee members prior to the meeting on May 10th, 2024 for review.

Attendees:

Field Nguyen, Career Education Counselor,
 Kevin Flores Hammell - Keysight Technologies
 Eneero Aguilar-Keysight Technologies
 Brooke Haueisen- Metrology Instructor-Adjunct
 Dan O'Brien-Machine Technology Department Coordinator
 George Bonnand-Machine Technology Instructor
 Chrissy Soret-Network Kinecton, LLC
 Alberto Figueroa-Student-apprentice
 Sal Arceo-Metrology Instructor-Adjunct
 Larry Deptula-Trak Machine Tools
 James Durate-Machine Technology Instructor-Adjunct
 Tim Huddy-Drafting Instructor-Adjunct

Meeting came to order at approximately 3:15 PM on 5-10-24 in room 728 at the Fullerton Campus.

Dan O'Brien (Department Coordinator) welcomed committee members and asked that everyone introduce themselves to the committee. Members introduced themselves to everyone during the meeting. Dan then began by presenting the agenda items for the meeting.

Department Update:

Dan gave an update on the department status as follows:

Headcount for Machine Technology courses only: 157
Machine Technology declared majors: 30
Headcount for Manufacturing (Weld, DRAF, and MACH): 614
Number of full-time faculty: 2
Number of part time faculty: 6

A general discussion ensued among some members of the committee.

Apprenticeship Programs:

Dan gave an update on the CTMAA (California Tooling Machining Apprenticeships) program. We also are aligned with the MAP2 apprenticeship program for Automation area occupations. Dan stated that we would like to work with more employers on apprenticeships, internships, and externship programs that increase student employment. A discussion ensued among committee members regarding apprenticeships, internships, and externship programs regardless of whether it is paid or unpaid. Many members stated their support for internships and apprenticeships.

New and On-Going Department Grants (17:36):

Dan gave an overview of the past grants (Strong Workforce and VTEA) and an account of where the money was spent which included metrology and CNC equipment as well as repair of metrology equipment. This year we only received approximately \$40K out of \$400K requested. (18:44) We applied for a \$400,000 grant for the Metrology program of which we received approximately \$40,000. This money was put to good use towards Romer arms and the repair of those arms. The request for additional money is highly dependent on the space limitations we currently face in the machine shop. In addition, Dan gave the committee members some insight and an overview on the challenges of installing new equipment or donated equipment in the shop which entails an elaborate anchoring process. At Fullerton College all equipment must be secured to the ground with specially designed earthquake anchor/brackets which cost between \$10 to \$20K per machine (22:20). Dan asked for input from the committee members on what new equipment we should be looking for in the future to serve the industries in our area. In summary, donations of equipment are welcomed however the process for installing the equipment is time consuming and costly. (23:40)

Study Abroad Program:

George Bonnand gave an overview of the study abroad program that will be occurring in the Summer of 2024. The TECH 108F course will be offered starting June 10th and run till July 9th. Class will be held every Tuesday and Thursday from 6-10PM. On July 10th members of the class will meet in Munich

Germany with a 10 trip to visit various automotive plants (Audi, BMW, Robotic plants, BMW bike plant) throughout Germany. The trip will conclude on July 20th in Berlin. We initially had 21 students signed up however due to students having insufficient funds we currently only have 11 students enrolled.

New Curriculum/Courses/Certificates -Review of Courses and Programs (Unit Revision, Descriptions, SLOs, Objectives, Course Content/Outlines, Textbook, etc.):

George when through all the programs stated below and status of each (27:40):

- Machine Technology Level I is State approved as of Fall 2018
- Machine Technology Level II is State approved as of Fall 2019
- Manufacturing Technology A.S. degree is State approved as of Fall 2019
- Mastercam Certificate is approved as of Fall 2018-Revised 2022 to include MACH 151 F
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- As of March of 2024 the courses and programs in the Machine Technology department and some of the courses and programs in the Technology department will commence and undergo a 2-year/6-year review process as requested by the State for updating and accreditation.
- Members to review Courses and Programs for Descriptions, Objectives, Student Learning Outcomes (SLOs), Textbooks, Course Content, Methods of instruction, Methods of evaluation, etc. for all courses/programs per handout material. See Table 1, 2, 3, and 4.

Note: See addendum materials (Zip files) for Programs and Courses (below) which have been emailed to all participants.

George then asked committee members if there were any questions. No questions were asked.

A review of each class listed below in Table 1 and 2 was given by George. A printed handout was given to each committee member showing all redlines and updates to be made to each course. A general discussion ensued between committee members and faculty regarding these changes. (30:30)

Table 1-Machine/Metrology Technology related courses (** courses may be revised for Unit revision, Description, Student Learning Outcomes (SLO) and/or other changes as deemed necessary by faculty. In addition the ** in front of the course name indicates courses have been reviewed/revised for online/hybrid instruction and/or other changes as deemed necessary by faculty.)

**MACH 101 F Introduction to Machine Tools *Active*	**MACH 110 F CNC Machine Set- Up and Operation *Active*	**MACH 142 F Advanced CNC Swiss Style Lathe Set-up and Operation *Active*	**MACH 157 F Computer-Aided Manufacturing *Active*
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**MACH 104 F Advanced Topics in Machine Technology *Active*	**MACH 120 F Advanced CNC Machining *Active*	**MACH 151 F Mastercam Lathe “Pending State approval”	**MACH 184 F Advanced CMM and Romer Arm Inspection *Active*
**MACH 105 F Conversational Programming I *Active*	**MACH 130 F Multiple Axis CNC Set and Operation *Active*	**MACH 152 F Advanced CNC Programming Using Mastercam *Active*	**MACH 185 F CMM and Romer Arm Applications *Active*
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**TECH 088 F Technical Science *Active*	**TECH 131 F Basic Electricity and Basic Electronics *Active*	**TECH 137 F Electronic Instrumentation and Networking *Active*	
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Table 3-Machine Technology Related Programs (**Programs may be revised for Unit revision, Description, Student Learning Outcomes (SLO) and/or other changes as deemed necessary by faculty.)

**CNC Operator Certificate	**Conversational Programming Skills Certificate	**Manufacturing Technology AS Degree	**Metrology Mini Skills Certificate
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Table 4-Technology Related Programs (**Programs may be revised for Unit revision, Description, Student Learning Outcomes (SLO) and/or other changes as deemed necessary by faculty.)

**Automation Fundamentals Certificate	**Industrial Maintenance Technician Certificate	**Theme Park Technology Specialist Certificate
**Electro-Mechanical Technician Certificate	**Industrial Technology AS*	**Engineering Technology Certificate

Vote: A call for a vote from committee members for all changes to items listed above in Table 1, 2, 3, and 4 was taken. All committee members approved the changes to be made to courses and programs as outlined during the presentation, in the tables, and shown in the printed out redlines/updates. There was a general discussion that ensued regarding this class size. In addition, a vote to limit the class size to 20 students was taken. All committee members approved this class size of 20 (43:54).

New Potential Curriculum (46:09):

Dan gave an overview of the new proposed course MACH 153F and what it would cover. In short the following was proposed:

- Mastercam Multi-Axis certificate
 - Creation of a new course MACH 153F for 4-5 axis programming. New certificate would include MACH 150F; MACH 151F; MACH 152F; MACH 157F; and the new MACH 153F course would be created. A call for a vote to approve these new courses and program was taken. All committee members vote to approve.

Open for discussion (47:30): Dan asked committee members if there any courses or programs that might be needed in their industry. A general discussion among committee members and faculty ensued.

(47:54) Committee members suggested a “Tooling” type certificate might be needed since there are a limited number of individuals in this field. (Note: “Tooling”, commonly referred to as machine tooling, is the process of shaping or forming materials to produce tolerance parts. This involves the use of jigs, molds, patterns, fixtures, and cutting tools to cut, shape, and form the parts. The equipment needed for tooling differs depending on the particular production, the type, and the size of the tooling. It is important to note that to execute tasks correctly and maintain operations, it’s critical to have the necessary tools. Suppose the manufacturing process is ineffective without the right tools. Moreover, any changes made to the tooling technology directly affect production quantity, quality, and cost.)

A discussion around a tooling class and a certificate in tooling with committees ensued. (52:30) Subjects like die work, foundry, castings, forgings, heat treating, injection molding, repair, jigs/fixtures, and other advanced subjects were discuss. Suggestions around offering a 2 or 3 unit course that covers some of these subjects was proposed by a committee member. Certificates in Tooling could be developed to

address employer needs was proposed as well. The MACH 104F course will be offered in Fall 2024 and it will cover and expose students to a variety of subjects that have been mentioned above however perhaps another more in-depth course or courses could be offered. Suggestions and discussions focused on this Tooling subject and the benefits for students and employers as well as cost. One member suggested that the tooling, jig and fixtures work closely with metrology courses as this many of the jig and fixture designs are for inspection. (58:57)

The discussion of “Tooling” shifted to new courses in Mastercam (MACH 151F and MACH 157F) how those courses benefit the student and maintain the program up to date with needs in the industry. (59:57).

Dan asked the committee members if anyone knew of any new equipment we should have in the shop or program that is currently in the industry. (1:00:24). Some discussion occurred around wire EDMs and the challenges of having this type of equipment. Wire EDM machines can be maintenance intense which was the case when the Fullerton college machine shop had a wire EDM machine years ago. (Note: Enrollment for these type of courses was low and the cost was high hence the decision to remove the WEDM and associated courses).

Future Staffing and Space Requirements:

Space is the main concern for our shop at this time for our machine shop courses and our metrology courses. Our metrology program is in need of more space to house the CMM machine, romer arms and various inspection tooling.(1:04:30). A discussion around this ensued among committee members.

(1:00:05:20) Dan stated to the committee the need for an additional faculty member in our department due to the rising need for metrology and limited hours that currently faculty members can work. (Note: Full time faculty members are limited to the number of hours that they can work each week per union rules/contract. In addition, retiring instructor replacements and new instructor request typically go to other divisions (Humanities, Social Sciences, Fine Arts, Math, and Natural Sciences). Our Technology and Engineering division currently is down by about 5 full time instructors, but no replacement can be foreseen at this time since the process for obtaining positions is somewhat covert in nature. (01:06:47) We have submitted request for a full time metrology/CAM instructor position on several occasions but there has been no traction with these request. (01:06:50) Dan explained the process and steps for obtaining a new faculty member to the committee along with the pitfalls. Committee members indicated after the meeting that they were in support of a new faculty member.

Donations: (01:07:46)

- Gene Haas Scholarship- \$17,000-for year 2023-2024
- CAM Tooling Association Scholarship-\$1500
- Horatio Alger Association-\$2500
- Master Chemical/Coast Industrial’s donations include—Trim Sol Microsol 585xt Coolant, oils, cleaners, and cutting tools.
- Esprit Software-CAD/CAM software

Dan stated that we received some materials from some companies last year however our main donation was from the Gene Haas foundation (\$17,000). This money will be distributed to students in the form of tools and tool boxes. The Gene Haas foundation over the years (since 2014) has given us well over

\$100K. In the past we have given students a check directly to them for this scholarship money however this year we have advised by the foundation to give students tools, tool boxes, tooling, etc. that could be used in the trade. Dan stated that there were some students who received the HAAS foundation money (not Fullerton College students but other students in other states) that did not use this money properly. Hence, we have been advised to spend this money for the students by buying them tool, tool boxes, tooling, etc. that can be used in their trade and career.

(01:09:50) The CAM workforce association has also given our Fullerton College students some scholarship money. This past year we had 3 students receive \$500 each. We are hopeful to have 3-5 students this coming year receive this scholarship.

We also had a couple of students receive the Horatio Alger Association for \$2500.

Student Recruitment and Conference Activities (01:11:59):

A general review and discussion by Dan and George to the committee members regarding the recruitment efforts that have been made this past year was given. They are as follows:

- Machine Technology Facebook Page-maintained
- Fullerton College Machine Technology LinkedIn Page-maintained
- Technology and Engineering Website-revised and maintained
- START event-July 2023
- Mfg. day-October 2023
- AUHSD Annual College and Career Fair October 2023.
- Loara High School-Winter Fest event-December 2023
- CTE Celebration Month-February 2024-Whittier High School
- California High School Career Day-February 2024
- Future Hornet Days-Vital link -March 2024
- HTEC conference-March 2024-hosted conference with 174+ attendees
- Jump Start Program-High School tours-February 2024 through May 2024. Hosted approximately 8 tours.

A general discussion between faculty and committee members around recruitment efforts ensued. Members expressed that many students need to be exposed to the machine technology program so that students are informed of this field of study. One member commented that mechanical engineering students many times enter the field of engineering but do not have any practical experience in the shop. A general discussion around the preparedness of engineering students (or lack thereof) to enter the engineering field ensued. The Machine Technology program can prepare all types of students for a career in manufacturing regardless of their specialty field of study.

Round Table Discussion: (01:24:36)

Dan reviewed the approved items by the committee members thus far during the meeting. The following items have been voted on and approved by committee members:

- Maintained class size to 20 per class

- Table 1, 2, 3, and 4 (**Programs and courses may be revised for Unit revision, Description, Student Learning Outcomes (SLO) and/or other changes as deemed necessary by faculty.)
- Addition of one full time faculty member (new head count) to support the Machine Technology and Metrology program.
- Addition of space for the Metrology program.

A general discussion around the requirements of courses and programs and what is expected of students in the course and program ensued. Prerequisites of courses and changes to the courses were discussed according to the Course and Program revision handouts that were given to the committee members during the meeting (as well as previous in emails). Student lack of knowledge coming into courses and program regarding tightening, torque wrenches, hand tools, threads, etc. was discussed and how we can do a better job at educating them. George indicated that MACH 104F (Advanced Topics) will be offered next Fall and that it will be held at the same time as the MACH 102F and 103F course. George and Dan explained to the committee how we are limited in what we can offer in terms of classes due to the number of hours that we are limited to by the district and the union contract. Hence the request for an additional head count to the machine technology program. With that said the college/district are very generous in allowing us to offer combined courses that have limited enrollment so that students can take these courses in a timely manner.

George stated to the committee that we have an open door (open visitation) policy for industry personnel and instructors should they want to visit or speak with us. We encourage students, parents, HR personnel, shop owners, etc. to come visit our shop.

A general discussion regarding student engagement and the student's previous knowledge ensued by the committee. The need for basic courses is necessary before students can proceed to more advanced courses to reduce damage and accidents that may occur. The basic courses also reinforce as well as give students the fundamental skills/knowledge necessary to proceed and be successful in more advanced courses. Many students want to skip the introductory courses however previous experience has shown and demonstrated to us that this is a necessary step in the student's success and development in this field of study. Skipping of steps in the teaching process undermines the student's success and achievement in this field. The machining and metrology field (as well as other manufacturing fields) are all tied together hence not understanding one step of the process may lead to a failure at another step in the process. Committee members commented on how some of the industry training requires employees to be rotated through various jobs in order to be successful at the job they were hired to do. This is currently being done by one of our industry partners (Keysight) with great success.

Dan and George thanked committee members for coming to our meeting.

Meeting was adjourned at 5:30 PM.