

**Electronics Technology
(Industrial Electronics and Electrical)
Advisory Committee
www.mjc.edu/teched**



August 13, 2015
4:30pm – 6:30pm
Modesto Junior College (West Campus)
Sierra Hall Building
Modesto, CA

Meeting Minutes

<input type="checkbox"/> Jeff Albright, Director of Vocational Education Modesto City Schools	<input type="checkbox"/> Matthew Lucas, Lawrence Livermore Labs
<input type="checkbox"/> Bob Apodaca, Saputo Foods	<input type="checkbox"/> Mike Mahler, US Farm Systems
<input checked="" type="checkbox"/> Dan Castro, Lawrence Livermore Labs	<input type="checkbox"/> Joe Majewski, EJ Gallo Winery
<input type="checkbox"/> John Coate, Hilmar Cheese	<input type="checkbox"/> Kenneth McCowen, Covanta Energy
<input type="checkbox"/> Rick Coffman, E & J Gallo Winery	<input checked="" type="checkbox"/> Pedro Mendez, MJC CTE, Workforce Development
<input checked="" type="checkbox"/> Adrian DeAngelis, MJC Industrial Electronics	<input type="checkbox"/> RC Noreen, Platt Electric
<input type="checkbox"/> Jeremy Henley, Guntert & Zimmerman Construction	<input type="checkbox"/> Brandon Nunez, Blue Diamond
<input checked="" type="checkbox"/> Jim Howen, MJC Industrial Electronics	<input checked="" type="checkbox"/> Jacob Oxenrider, San Luis & Delta Mendota Water Authority
<input type="checkbox"/> Justin Krum, First Light Energy	<input checked="" type="checkbox"/> Michael Ryun, Modesto Irrigation District
<input type="checkbox"/> Michael Catlapp, Johansen High School	<input type="checkbox"/> Doug Van Diepen, Del Monte Foods
<input checked="" type="checkbox"/> George Loogman, Satake	<input checked="" type="checkbox"/> Chris Vanmeter, Ceres High School

4:30 – 4:35 p.m. Welcome

Pedro Mendez, *Dean*
Career Technical Education

P Mendez welcomed attendees to the MJC West Campus and to participation in the advisory committee.

4:35 – 4:40 p.m. Introductions
Business Interest & Needs

ALL

Business Attendee Introductions: Business members introduce themselves and spend some time discussing interests in what they see as a need in industry. J Henley referenced the need for individuals with not only technical skills and knowledge but a need for troubleshooting skills. J Oxenrider, stated a need to be able to have programs where they could send their employees or apprentices to school locally and customized curriculum for their organizations need. G Loogman discuss the general need they are seeing in their agriculture clients and the need to recruit students who can be developed as technicians to support equipment the industry with complex equipment being installed in the area. D Castro discussed the need to hire individuals with Electronics preparedness for his particular area. M Ryun (quasi roll as MJC Instructor and MID representative) reference during the meeting a full breadth of fundamental electrical and automation preparedness to have a foundation to grow with industry.

Education Attendee Introductions:

P Mendez, Dean of CTE, Community & Workforce Development

J Howen, MJC Lead Industrial Electronics Professor

[MJC Courses: Fundamental of Electricity, Electronics Fabrication, Digital Electronics, Instrumentation, Troubleshooting Techniques],

Adrian DeAngelis, MJC Industrial Electronics Professor

[MJC Courses: Fundamentals of Electricity, Electrical Safety, Electrical Blue Print Reading, Motor Controls, National Electrical Codes, Commercial & Industrial Wiring],

Michael Ryun, MJC Industrial Electronics Adjunct Instructor

[MJC Courses: Residential Wiring, PLC and PAC]

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Chris Vanmeter, Ceres High School Manufacturing Program
[MJC Courses: Introduction to Applied Technologies, Fundamentals of Electricity, Photovoltaic Systems]

4:40 – 5:45 p.m.	Review of Programs *Industrial Electronics (HMI Classes) *Electrician *ACT Pathway *Electrician DAS (School 136) *CTE Pathways (Ceres, Johansen & Fanuc Robotics)	Jim Howen, Lead Instructor Industrial Electronics
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Programs were presented by J Howen and P Mendez (See Attachments).

Members discussed each program its courses and direction. Discussion was very engaging. Below is an attempt to capture discussions highlights:

- **Industrial Electronics [Certificate, AS Degree]:** This is the most complete program offered by the department. Representative inquired about Electrical Blue Print Reading. Professor DeAngelis provide examples of blue prints students begin with early in the semester and what they are asked to do and level of prints offered at the end of the semester. Members felt program was thorough.

Discussion Conclusion: Program direction support by members of industry with recommended changes.

Recommendation: Add ELTEC 235: NEC to Elective Structure. One employer would require employee to enroll in this course. NEC is viable as an option.

- **Electrician [Certificate]:** This program is designed for the traditionalist electrician. Courses are aligned with the Electrician Trainee DAS classes. Goal is prepare students to work in electrical installation and repair.

Discussion Conclusion: Program direction support by members of industry with recommended changes.

Recommendation: Add ELTEC 221: Instrumentation to Required Courses and drop ELTEC 232: PLC to Elective Courses. Electricians with this focus entering industry are in more need of understanding instrumentation devices and concepts vs PLC.

- **Electrical Installer (Skills Recognition Award):** Program meant to provide quick shorten completion point to students enrolled in program seeking to quickly begin their work. Members discussed its merits and felt while the individual that the program would have value for a student completing and applying for an entry level job. The understanding would be that this person would need to continue their education in the field of Electricity.

Discussion Conclusion: Program direction supported by members of industry.

- **Electrician Trainee DAS Program:** P Mendez explained that MJC is designated as School #136 through the CA Department of Industrial Relation and DAS. What this means is that individuals who are not enrolled in an official electrical apprenticeship program have an option to attend MJC as an “Electrician Trainee.” This person must work under a journeyed electrician. It provides business with this level of construction and installation electrical work with an option to still grow their employees to journey level electrician status. The approach is an alternative option. Employees must complete 150 hours per year. This typically means registering in two Electrical Courses per calendar year. Testing stopping points are (1) lighting electrician – 2,400 hours worked in the field, (2) residential electrician test - 4,800 hours worked in the field and (3) general electrician (journey level equivalent) – 8,000 hours worked in the field.

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- **CTE Pathway:** P Mendez provided a handout (see attached) of what schools refer to when attempt to layout a pattern for students from high school to community colleges.

5:45 – 6:30 p.m.	Review & Discussion of Schedule & Academy Concept	ALL
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MJC presented scheduling designed to focus courses serving two different audiences (1) enrolled students working and (2) students able to enroll in courses as dedicated FT students for a short and intensive period of time. Below is discussion on scheduling and academy designed concepts.

- (1) **Course schedules designed for working students:** MJC faculty recommended proactively scheduling course into morning [8:00am – 12:00pm] and evening [5:30pm-10:40pm] sections of the day. Schedules would provide rotation of class offerings to allow students to enroll in classes. Feedback from industry confirmed that the proposed areas for scheduling would work with industry and provide options for students working day shifts, swing shift and graveyard shifts. Night courses was the time of the day employers around the table felt was most important in supporting industry. The advisory committee member attendees agreed that for sites with rotating schedules for employees would still be challenged. P Mendez stated instructors commonly deal with students in this situation and generally attempt to work with employees enrolled in classes with this challenges as much as possible.

Conclusion: Direction to move classes to morning and evening was widely supported as an effective scheduling strategy.

- (2) **Academy:** The goal behind this proposed concept was to design a program layout for student with limited work experience that can exclusive focus on skill and knowledge preparation for industry in a short period of time. The academy concept was presented as a middle of the day program 5 days a week, students in uniform, punch in clock environment beginning in June 2016 and ending April 2017. A cohort of up to 24 students would be accepted using a Lottery process with criteria elements following models from the MJC Fire Academy and MJC Nursing Program. Feedback was very positive for this type of approach and members saw much merit to not only the academic content intensity but to the ability for students to demonstrate reliability in attendance and professionalism via a mimicked academic environment linked to expectations in industry.

Conclusion: Overwhelming support for Academy concept. J Henley who attended the ACT Program at MJC felt the scaled up version added so much more to the preparation of students effectively for work. Support for both the Manufacturing Academy Pilot proposed start date Spring 2016 – Summer 2016 and the more intensive Industrial Electronics Academy with a propose Summer 2016 – Spring 2017.

Postponed Due To Time. Information	Program Updates *Equipment & Technology Needs *Internships / Job Placement	ALL
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Next meeting: Spring 2016 – Modesto Junior College
To Be Announce and By Mail Invitation