Advisory Committee Board Meeting - Engineering
March 25, 2020; 5:00 – 6:00 pm; Moorpark College – Zoom Meeting

NAMES OF ADVISORY COMMITTEE MEMBERS	ATTENDANCE Present or Absent	Name of Company, Business, College, High School	Email Address	Telephone Number	Mailing Address
Chair of the Meeting: Scarlet Relle	Present	Moorpark College	srelle@vcccd.edu	805-553-4162	7075 Campus Center Dr. Moorpark
Industry Partners					
Christopher Lewis	Present	JSL Technologies	Christopher.Lewis@jsltechinc.com		
Nathan Christian	Present	JSL Technologies	Nathan.Christian@jsltechinc.com		
Douglas Petercsak	Present	Robotics			
Nicholas Gray	Present	Skurka	ngray@skurka-aero.com		
Devin Venhuizen	Present	Haas	dvenhuizen@haascnc.com		
Bill Cunneen	Present	Navy	jimjunor934@gmail.com>;		
Greg McGillis-Smith	Present	Oaks Christian High School and Mechanical Engineer	greg@gillis-smith.com		
Aaron	Present	Skyworks Solutions			
Steven Nial	Present	Skyworks Solutions	Steven.Nial@skyworksinc.com		
Prajakta	Present	Skyworks Solutions	Prajakta.Rajeshirke@skyworksinc.com		

Rajeshirke					
Israel Rodriguez,	Could not attend but emailed with him and met with him prior to the AC meeting	President of the Small Manufacturers Association of California	irodconsulting@gmail.com		
Dean: Vacant position					
Faculty:					
Eric Reese (Dept. Chair)	Present	Moorpark College	ereese@vcccd.ed		7075 Campus Center Dr. Moorpark
Danita Redd (Counseling STEM)	Present	Moorpark College	dredd@vcccd.edu		7075 Campus Center Dr. Moorpark
Samantha Zaldivar(Counseling STEM)	Present	Moorpark College	szaldivar@vcccd.edu		7075 Campus Center Dr. Moorpark
Daniel Aguilar(Counseling STEM)	Present	Moorpark College	daguilar@vcccd.edu		7075 Campus Center Dr. Moorpark
Celine Park (Career & Transfer Ctr)	Present	Moorpark College	cpark@vcccd.edu		7075 Campus Center Dr. Moorpark
Raul Torres(Career & Transfer Ctr)	Present	Moorpark College	raul_torres6@vcccd.edu		7075 Campus Center Dr. Moorpark
Khosrow Rad (Engr)	Present	Moorpark College	krad@vcccd.edu		7075 Campus Center Dr. Moorpark
Jenny Ding (Engr)	Present	Moorpark College	lding@vcccd.edu		7075 Campus Center Dr. Moorpark
James Artero (Lab Technician – Engr., CS, Physics, Astro.,	Present	Moorpark College	james_artero1@vcccd.edu		7075 Campus Center Dr. Moorpark

Env.Sci.)					

AGENDA **ACTION SUMMARY**

	Notes	**ACTION**
1.Welcome and Introductions 1.1 Update on Action Items from last meeting	At last year's Advisory Committee (AC) Meeting conducted on 3/20/19, the committee recommended the creation of 2 focused Certificates in Engineering Technology; namely: Electronics and Mechatronics. They recommended certain skills to be taught in these courses in addition to the requisite technical knowledge; namely: Computer skills, Computational skills, Written and verbal communication skills, Soft skills. Furthermore, they also recommended a series of courses to be included in the Certificates: • Microprocessors and Microcontrollers • Automated Machines including programming and using PLCs • Mechanical Devices including pneumatics, vacuum, and hydraulics • Testing, Data Acquisition and Troubleshooting of Mechanical and Electrical Devices • CAD – Computer Aided Drafting • Sensors and Motors • Electronic Basics – digital circuits They also indicated that Internships were a great way to get students involved with the practical aspects of the engineering work, in addition to providing them with an opportunity to network, to learn soft-skills on the job, and to obtain a better understanding of the engineering principles at work. These recommendations were implemented. Industry experts were hired to help the lead engineering faculty, Scarlet Relle, to write these courses and create the Certificates. Our Career and Transfer Center worked with some engineering firms to increase the number of student internships. Currently, 7 new courses in Electronics and Mechatronics Technology have been written: Digital Circuits, Basic Electronics, Microprocessors and Microcontrollers, Electrical Devices, Electronics Capstone course, Radar, Unmanned Aerial Vehicles. There are 3 more courses that still need to be completed pertaining to Mechatronics Certificate. The Certificates have not yet been submitted to the Curriculum Process because the lead engineering faculty was seeking advice on whether or not to include Internships as a mandatory component of earning these Certificates. This topic and the review of the courses were the focus of this year's AC meeting.	

2. Current Status of Program: 2.1 Updates/ changes to program 2.2 Student Success 2.3 Student Employment 2.4 Program needs – internships/ equipment/ job shadowing/ mentoring	The current state of the engineering program is strong. We have great success with transferring students to degree completion institutions and placing them in Internships. The preparedness of our students for university work and for the workforce is evident from the feedback that we receive from our transfer students, transfer institutions, and employers who hire our students as interns. The engineering program is always seeking to enhance internship opportunities for students. Based on the new direction of the engineering program as indicated in the aforementioned section, the development of technology certificates, the program will need to purchase more laboratory equipment and supplies to support the hands-on portions of the new courses such as robots, drones, electronic equipment, electrical and mechanical devices, etc. and will also need some funds for advertising these new certificate programs in the community.	
3. Industry 3.1 Updates from industry – trends/ changes 3.2 Suggestions for changes to the curriculum and other program improvements 3.3 Suggestions for incorporating soft skills into the curriculum 3.4 Suggestions for increasing enrollment	The lead engineering faculty, Scarlet Relle, asked the committee about the feasibility of including Internships as a mandatory requisite for obtaining the technology certificates in electronics and mechatronics. The consensus of the committee was that although internships are a great way to support the technical program at our college and to train the next generation of the workforce, it is not a good idea to make internships a requirement for obtaining the certificates. Their reasoning was that Internships could be difficult to offer and to support because of the unpredictability of the economy. Although, Mr. Bill Cunneen from the Navy indicated that the Navy will always offer paid internships based on a few criteria one of which is to have US citizenship. Representatives from the JSL Industries, Christopher Lewis and Nathan Christian, asked about the number of interns that is foreseen in these Certificate programs. Our answer was that we would hope to advertise for these certificate programs in the community and be able to support 20 to 25 students in a cohort. Another AC participant, Nicholas Gray from Skurka, indicated the need for training students in Configuration Management. This training would include software, hardware, mechanical design, reliability, safety, tracking changes, industry standards, etc. Scarlet asked if this had to be its own separate course or could this training be folded into the courses that were already developed? The answer was that it could be folded in, however, our lab technician James Artero suggested an introductory course in Systems Management and developing design requirements. This suggestion received a lot of positive feedback from the group. Nicholas Gray also indicated the need for technicians to know about digital and analog controls and how this knowledge would require calculus. However our part time faculty Dr. Rad who is also an expert in electrical and mechanical devices and helped with the curricular developments assured the committee that these skills can be taught without the	

	use of calculus. Another suggestion from Devin Venhuizen was to teach students quality control and measuring the finished product, and knowing for example that a ½" part will not fit into another ½" part. This again is a skill and knowledge set that needs to be folded into the courses, most definitely be addressed in the capstone courses. Another participant Douglas Petercsak indicated the necessity of knowledge to handle electromagnetic devices and Dr. Rad indicated that the handling of electromagnetic devices will be covered in the courses. Another suggestion and question by Douglas Petercsak was about 3-D printing, we indicated that our CAD courses do provide opportunities for our students to do 3D printing using either the engineering lab or the Maker Space on campus. Another participant Greg Gillis-Smith supported the technician certificates mentioning that engineering technicians could earn salaries ranging from $58,000 to $68,000 per year. Christopher Lewis from JSL further supported the value of internships by indicating that interns overtime build valuable relationships with the employers which would be beneficial when they are ready to seek full time employment. Overall the AC was supportive of the new direction of the engineering program in terms of these certificates and internships, they had more suggestions about specific topics to be incorporated in the curriculum. The industry partners in the AC also agreed to the hosting of Zoom meetings for our students.	
4. New Business	The lead engineering faculty, Scarlet Relle, needs to research and explore the curriculum suggested by the committee in terms of specific topics that would be covered in the recommended course regarding Systems Management. She also needs to complete the writing of the Certificates without including internships as a necessary criteria in obtaining the certificates. Furthermore, the lead engineering faculty will work with the Career Transfer Center to secure more internships for the engineering students.	
5. Set next meeting time, place, date.	Next meeting will be in March of 2021 at Moorpark College.	

Meeting Summary completed and distributed by: Lead Engineering Faculty, Scarlet Relle_____Date:_____3/31/20_____

HANDOUTS
Power Point Presentation

*Please note Meeting Summaries should be completed, distributed to all participants and posted on MC Share in Advisory committee folder within 1 month of the meeting.