



**Aeronautics Department**  
**Advisory Committee Minutes - DRAFT**  
**March 21, 2017**  
**12:00 noon – 3:00 p.m.**  
**28B-107**

**See page 9 for UAS Approval by  
 Advisory Committee**

Lori Armstrong	x	Pete Loncteaux	x	Alan Wapner	x	Darma Paeden	x	Steve Shakelford	x	
Will Chesher	x	Keith Mew	x	Christopher Benoe	x	Jason Perez	x	David Todd	x	
Brock Christoval	x	Paul Oswald	x	Marisa Fierro	x	Sarah Plesetz	x			
Stanley Harriman	x	Steve Smith	x	Jude Flemeing	x	Linda Rogus	x			
Marshall Jen	x	Frank Svensson	x	Bill Lambert	x	Robert Rogus	x			
Ed Kuethen	x	Ed Valdez	x	Jesse Lopez	x	Vivian Saldana	x			

Item	Discussion	Outcome/Action Needed
<b>Welcome and Introductions (Dept Chair)</b>	Welcome and Introductions	Two student members were also welcomed to the committee. Meeting called to order with introductions at 12:30 p.m.  The department welcomed new committee members from Cypress College, Orange Coast College, Cal Poly Pomona, Airmap Corp (UAS), Flyspan Corp (UAS).  New Mt. SAC committee members welcomed – Counseling Professor Jesse Lopez, Photography Professor Jason Perez, Photography Technician Christopher Benoe
	Associate Dean	Associate Dean Sarah Plesetz gave a summary of the “purpose, role, and responsibilities of an advisory committee”.



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<b>Approval of Minutes - Mandatory</b>		Minutes from 2016 Advisory Meeting: approved unanimously.
<b>Advisory-Driven Program Improvements to Date</b>	Summary of changes since last advisory meeting	<b>Advisory Driven Program Improvements</b> <ul style="list-style-type: none"> <li>• New Aircraft Paint</li> <li>• New Motion Redbird Simulator</li> <li>• FAA Aircraft Dispatcher Program – 100% pass rate and 100% certification rate</li> <li>• Aviation Textbook Reserve at Library</li> <li>• Continuation of AERO specific tutoring and lab assistants</li> <li>• Aviation Magnet High School connections</li> <li>• Second annual Aviation Transfer Day</li> <li>• Upgraded internet connectivity at Brackett Airport Facility</li> <li>• New radio upgrades in most of the aircraft</li> <li>• Purchased new aviation headsets</li> <li>• Successful start of new Mt. SAC Aviation Facebook page</li> <li>• New courses submitted: AERO 98 Introduction of Aviation Careers (Fall 2018 start)</li> <li>• Aviation Ambassador outreach program – highly successful</li> <li>• Started new student drone association (club)</li> <li>• Spring 2016 completed Aviation Water Survival Course (Flying Team, Flight Instructors, pilots from Flight Training program)</li> <li>• Faculty attended conferences related to student success and retention</li> <li>• Faculty attended conferences for unmanned aircraft systems (uas)</li> </ul>



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	<p data-bbox="579 472 810 537">Industry Discussion</p> <p data-bbox="579 691 810 756">Industry Discussion</p>	<p data-bbox="831 472 1283 496"><b>BREAKOUT SESSION SUMMARIES:</b></p> <p data-bbox="831 529 1119 553"><b>COMMERCIAL FLIGHT</b></p> <p data-bbox="831 594 1986 805">Ed: Discussion was about pilot shortage of the industry, lack of airplanes at Mt. SAC for initial flight instruction. Discussion regarding the industrywide shortage of Flight instructors. Ed brought up the possibility of offering a new course in Human Factors (HF). “Student’s need HF experience for workplace and cockpit, and the industry is pushing for positive results”. Would like to see a push in human factors for the young population. Discussion occurred with summary that basic understanding and training in HF will be useful for our graduates for their entire career. Research items: CRM training equipment and curriculum.</p> <p data-bbox="831 837 1986 984">Robert: Aero 98 is a new course to be offered next year. Intended for new students and has two primary purposes - overview of the aviation industry and tools for college and career success. Some aspects of HF are included in this curriculum. Comment from Linda updated the committee on status of approval (curriculum was reviewed by Counseling Department and approved with minor changes).</p> <p data-bbox="831 1016 1986 1073">Jude: I’m partial to the subject. Our students will benefit from Leadership training (for a co-pilot to stand up to pilot). I’d like to help develop the class or a CRM class.</p> <p data-bbox="831 1114 1986 1170">Ed: We are seeing conflicts with co-pilot not speaking when problems arise (deferring to the Captain).</p> <p data-bbox="831 1203 1986 1260">Pete: Social influences can affect safety. Here in the US we are belligerent and will speak up to the captain. From other areas, they tend to take more risk. I am very for adding CRM.</p> <p data-bbox="831 1292 1986 1349">Stanley: Glad to see that FAA Part 61 used at Mt. SAC. That is the way to go. Make sure students understand benefits of Part 61 before moving on.</p> <p data-bbox="831 1382 1986 1471">Mark: Caution for our students “We are a state of legalized pot now”. FAA, being federal, doesn’t recognize that marijuana is legal. We should have discussion with students about “making a choice, yes, legal, but it’s not right.” Aviation careers bring a lot of responsibility.</p>



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		<p>UNMANNED AIRCRAFT SYSTEMS (UAS)</p> <p>Brock: Collaboration between UAS industry and Mt. SAC will be great. Mt. SAC curriculum will be hitting all goals the industry wants. "I think the advisory has the right people. I am excited to see this come alive."</p> <p>Jay: In the Aeronautics department - you guys fly. Our approach in the Photo Department is tactics, strategy, and equipment. Our goal is to understand exposure, optics, resolutions. It is what we call "production value". Safety and risk management is going to be a big part of what both departments teach.</p> <p>Will: We are excited in doing this. The industry and the public should understand that UAS pilots are full members of the aviation community. We want UAS to be integrated into the national airspace system ASAP. Without a program like this the industry wouldn't have a chance to grow</p> <p>Brock: One of our main concerns is safe operations. FAR Part 107 serves as a starting point. UAS are finally recognized by the government as being aircraft, and not toys. Acceptance means unprecedented growth opportunities.</p> <p>Robert: Faculty have developed the Unmanned Aircraft Systems Certificate and Associate of Science Degree (UAS Program). Submission of UAS curriculum in May will add a 13 unit UAS certificate (employable after two semesters). And, an A.S. UAS degree which has 26.5 units (plus general education). The existing courses in the degree will be AERO 99, 100, 102, 104, 200. The new courses will be AERO 160 UAS Basics, AERO 212 UAS Advanced, AERO 252 UAS Safety and Security. Also included are Photo 10 plus Photo 50. Elective credits will be included in the degree and certificate. Faculty are excited that high school students will see a pathway to a career in as short as two semesters.</p> <p>Steve: We are trying to start them in high school to have a pathway. We want to focus them on the right path and not take anything extra.</p> <p>OPEN DISCUSSION PERIOD</p> <p>Darma: What are the prerequisites for AERO 99?</p>



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		<p>Robert: We have advisory prerequisites with entry level course – no barriers for entry into program</p> <p>Ed: Brock do they go to you and say I want to do this, what do I have to do?</p> <p>Brock: Yes, the market is growing, this is a new path of aviation. A new market, its early, but that's a good thing. We have a growing new market. The trend is growing, the jobs are already there.</p> <p>Stanley: Have you considered partnering with your computer science department?</p> <p>Jay: they are about building drones and learning to code. Our focus is on the skill and art of using FAA approved UAS on the job.</p>

<b>Program Completion and Graduation Rates</b>  <a href="http://datamart.cccco.edu/Outcomes/Program_Awards.aspx">http://datamart.cccco.edu/Outcomes/Program_Awards.aspx</a>				<b>Aeronautics Retention &amp; Success Rate 2012-2016</b>				
				Enrollment Count	Retention Count	Success Count	Retention Rate	Success Rate
				Spring 2012				



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				1,038	941	825	90.66%	79.48%
			Fall 2012					
				1,097	1,026	907	93.53%	82.68%
			Spring 2013					
				1,053	938	841	89.08%	79.87%
			Fall 2013					
				1,049	945	821	90.09%	78.27%
			Spring 2014					
				906	834	692	92.05%	76.38%
			Fall 2014					
				724	659	520	91.02%	71.82%
			Spring 2015					
				632	584	481	92.41%	76.11%
			Fall 2015					
				626	587	511	93.77%	81.63%
			Spring 2016					
				649	602	514	92.76%	79.20%
		Fall 2016						
			660	612	511	92.73%	77.42%	
<b>A.S. Degrees Awarded</b>	<b>Year</b>	<b>2014-2015</b>	<b>2015-2016</b>					
	<b>Flight</b>	46	41	<b>FAA AIRCRAFT DISPATCHER CERTIFICATE:</b> <b>Inaugural Class Summer 2016:</b> <b>100% Certification Rate</b>				



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	ATC	49	31	(11 students of 11 students)																		
<p><b>Summary of Current and Projected Employment Outlook</b></p>				<p><b><u>California Occupational Employment Projections 2012-2022</u></b></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="padding: 2px;">Airline Pilots, Copilots, and Flight Engineers</td> <td style="text-align: center; padding: 2px;">6,000</td> <td style="text-align: center; padding: 2px;">6,900</td> <td style="text-align: center; padding: 2px;">900</td> <td style="text-align: center; padding: 2px;">15.0 %</td> <td style="text-align: center; padding: 2px;">1.5 %</td> </tr> <tr> <td style="padding: 2px;">Commercial Pilots</td> <td style="text-align: center; padding: 2px;">3,100</td> <td style="text-align: center; padding: 2px;">3,500</td> <td style="text-align: center; padding: 2px;">400</td> <td style="text-align: center; padding: 2px;">12.9 %</td> <td style="text-align: center; padding: 2px;">1.3 %</td> </tr> <tr> <td style="padding: 2px;">Air Traffic Controllers</td> <td style="text-align: center; padding: 2px;">2,500</td> <td style="text-align: center; padding: 2px;">2,500</td> <td style="text-align: center; padding: 2px;">0</td> <td style="text-align: center; padding: 2px;">0.0 %</td> <td style="text-align: center; padding: 2px;">0.0 %</td> </tr> </table> <p><a href="http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html">http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html</a></p> <p><b><u>ATC Hiring: go to the 2016-2017 FAA Controller Workforce Plan</u></b>  <a href="https://www.faa.gov/air_traffic/publications/controller_staffing/">https://www.faa.gov/air_traffic/publications/controller_staffing/</a></p> <p><b>Resource Requests for 2017-2018</b></p> <ul style="list-style-type: none"> <li>• AERO Tutors</li> <li>• ATC Lab Assistants</li> <li>• Flight Simulator Assistants</li> </ul>	Airline Pilots, Copilots, and Flight Engineers	6,000	6,900	900	15.0 %	1.5 %	Commercial Pilots	3,100	3,500	400	12.9 %	1.3 %	Air Traffic Controllers	2,500	2,500	0	0.0 %	0.0 %
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Commercial Pilots	3,100	3,500	400	12.9 %	1.3 %																	
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<p><b>Resource Requests</b></p>																						



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<b>Resource Requests</b>		<ul style="list-style-type: none"><li>• Classroom Chair replacement (room 103 &amp;107)</li><li>• Textbooks for library reserve</li><li>• UAS program materials and equipment</li><li>• Aircraft Dispatch (ADX) program materials and equipment</li><li>• Conference &amp; travel to support: non-traditional, UAS, ADX</li><li>• Marketing materials</li><li>• Aviation student ambassador program support</li><li>• Boeing 737NG mock-up for ADX program</li><li>• Modular Building at Brackett Airport</li><li>• Two or more Primary Training Airplanes (Cessna 172)</li><li>• AV equipment to replace aging systems</li><li>• Two flight simulators: motion flight simulator to increase fidelity of simulation plus a replacement simulator for aging systems</li><li>• Hire student dispatchers</li><li>• Hire a dedicated aviation mechanic</li><li>• Add a Multi-engine Training Airplane (type TBD)</li><li>• Upgrade aging airplane avionic panels and radios (ADS-B upgrade)</li><li>• Add engine simulation stations</li></ul>
<b>Resource Requests</b>		<b>Voting on all resource requests listed above:</b> Ayes – Unanimous
<b>VOTING – Resource Requests</b>		





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<p><b>4 Year Review &amp; Curriculum Review</b></p>		<p>Faculty and committee members reviewed the curriculum for the Unmanned Aircraft Systems Certificate and A.S. Degree. The Committee agreed that all the curriculum should go forward as approved.</p> <p>Faculty and committee members reviewed the AERO and AIRT courses for the 4 year cycle of review. The Committee agreed that all the courses comply with FAA and industry standards.</p> <p>Faculty and committee members discussed the four classes in the process of SLO review with due date of May 30, 2017 - AERO 102, AERO 104, AERO 202, AERO 258.</p> <p>Faculty and committee members deferred for later discussion the development of an advanced weather course, and a credit course for flight training (flying team).</p>
<p><b>VOTING – Proposed Curriculum Requests</b></p>		<p><b>Voting on all proposed curriculum changes:</b>  Ayes – Unanimous</p>
<p><b>Future Meetings</b></p>		<p>Meeting adjourned at 3:10 PM  Future meeting March 2018 (TBD)</p>