

**December 11, 2020
Zoom Virtual Meeting Room
Meeting Convened at 1:01 p.m.
Meeting Adjourned at 4:02 p.m.
Facilitator: Stanley Harriman**

<u>COMMITTEE MEMBERS</u>	<u>EX-OFFICIO</u>
Jay Arcemont, COO, Sky Partners Scott Cutshall, SVP Business Operations, Clay Lacy Amy Fuller, Contour Airlines Jessica Harlin, FO, Alaska Airlines Matthew Harlin, FAA Designated Pilot Examiner/ A320 First Officer, LGB FSDO/JetBlue Steven Roy, Pilot-ATP, Entrepreneur, Board of Advisors, Blue Tail Aviation David J. Todd, Flight Training Coordinator, Mt. San Antonio College	Elaine Devlin, Staff, Career Education Stanley Harriman, Faculty, OCC Joel Jones, Faculty, OCC Lisa Knuppel, Dean, Career Education, Interim Dean, Business & Computing, OCC Mike Mann, PT Faculty, OCC Elizabeth Page, Curriculum Specialist, OCC Daniel Shrader, Dean, Technology, OCC Pam Walker, Interim VP of Instruction, OCC

ADVISORY COMMITTEE MEETING SUMMARY

1. **Welcome & Introductions**
 - Committee members introduced themselves and confirmed their respective titles and roles at their respective companies.
 - The committee approved the notes from the last meeting held in March 2017.
 - Stanley Harriman reviewed the role and responsibilities of this meeting as follows:
 - Review and access the structure, program-level outcomes and curriculum of the Aviation Science program;
 - Ratify and recommend changes to program structure, PSLOs and curriculum so that the program and curriculum align to stated occupational outcomes and industry needs and requirements.

2. **Program Outcome Data**
 - **Review and ratification of Existing Certificates and Program Level Student Learning Outcomes (PLOs)** The committee reviewed the following PLOs and ratified the following suggestions:
 - **Aviation Science:**
 - **“Students will”** develop the analytical and critical thinking skills necessary for completion of flight training and successful completion of federally administered written examinations for licensing as pilots. (Add “Student is” an keep the rest of the PLO as is)
 - **“Students will”** develop the analytical and critical thinking skills necessary for completion of aviation ground school academic courses giving them the background knowledge necessary to enter the air transportation industry as professionals in a non-flying occupations **“capacities.”**
 - Revise this second bullet on Aviation PLOs.
 - Suggested removing the words “as professionals, a, and occupations” in the above text to read...enter the air transportation work force in non-flying capacities.”

- Stanley Harriman is going to work on the wording to make them more specific and to include outcome occupations.
- The committee suggested the following occupations that go with the PLO skills in Aviation Science: ground support operations, customer service, gate attendants, marketing, sales, flight crew attendants, gate attendants and charter coordinators.
- Add words like “baseline understanding of industry and terminology.”
- **Aircraft Dispatcher:** Students will develop the analytical and critical thinking skills necessary for completion of aircraft dispatcher training and successful completion of federally administered knowledge and practical tests “for aircraft dispatcher certification.”
 - Add the words “for aircraft dispatcher certificate” at the end of the statement.
- **Airline Transport Pilot:** Students will develop the analytical and critical thinking skills necessary for completion of flight training and successful completion of federally administered knowledge exams for “airline transport pilot certification.” licensing as pilots.
 - Add the words “aircraft transfer certificate” at the end of the statement.
 - Delete the words “licensing as pilots.”
- **Commercial Pilot:**
 - “Students will” develop the analytical and critical thinking skills necessary for completion of flight training and successful completion of federally administered written examinations for licensing as pilots. “commercial pilot certification.”
 - Delete the words “licensing as pilots”
 - Add the words “Students will” and “commercial pilot certification”
 - ~~Develop the critical thinking and analytical thinking skills necessary for completion of academic courses giving them the knowledge necessary to enter the air transportation industry.~~
 - Remove this second PLO statement.
- **Flight Operations:** Develop the critical and analytical thinking skills necessary for completion of federally administered knowledge tests. Add changes to read as “Students will” develop the critical thinking and analytical thinking skills necessary for completion “of academic courses giving the knowledge necessary to enter the air transportation industry.”
 - Delete the words “of federally administered knowledge tests”
 - Replace the old PLO statement with “Students will develop the critical thinking and analytical thinking skills necessary for completion of academic courses giving the knowledge necessary to enter the air transportation industry.”
 - Suggested to add occupation title (s) rather than say air transportation industry
- **Instrument Pilot:** “Students will” develop the critical and analytical thinking skills necessary for completion of instrument flight training and successful completion of federally administered “written examination for instrument pilot rating certification.”
 - Remove “practical and knowledge tests for the instrument”
 - Add words “students will” and “written examination for the instrument rating pilot certification.”
- **Private Pilot:** Students will develop the analytical and critical thinking skills necessary for completion of federally administered practical and knowledge tests “for private pilot certification.”
 - Remove the words “practical and”
 - Add the words “for private pilot certification”
- **Unmanned Aircraft Systems:** ~~Students who complete the Unmanned Aircraft Systems Certificate of Specialization will be capable of deploying and piloting unmanned aircraft systems, managing flight control systems, collecting and~~

~~analyzing telemetry data, programming autonomous flight missions and securely communicating with a variety of different aircraft flying different types of missions.~~
“Students will develop the analytical and critical thinking skills necessary for completion of UAS training and successful completion of federally administered knowledge for remote pilot certification.”

- Remove the existing PLO
- Replace the PLO with “Students will develop the analytical and critical thinking skills necessary for completion of UAS training and successful completion of federally administered knowledge for remote pilot certification.”
- Keep the program title as is as Unmanned Aircraft Systems
- **Biennial Program Review (BR) (Attached)**
 - The committee reviewed occupation/job titles and codes and wage information and reflected on its accuracy and completeness.
 - The committee recommended the following first four job occupations be removed from the database:
 - Transportation, storage, and distribution managers (11-3071)
 - Avionics Technician (49-2091)
 - Aircraft Mechanics and Service Technicians (49-3011)
 - Aircraft Structure, Surfaces, Rigging and Systems Assemblers (51-2011)
 - Flight instructors be added as a possible occupation
 - Drone pilots be added as a possible occupation
 - Ground support operators as a possible occupation to include: customer service, gate attendants, marketing public ally, sales, flight crew attendants, gate attendants and charter coordinators
 - Committee reflected on enrollment and completer status and trends
 - Enrollment strong
 - Noted the growth in the job labor market and in the program
 - OCC is awarding 54% of Aviation Science certificates and degrees in Orange County area
 - Strong viable program
 - This report goes to our board every other year so they can approve the program and so it can continue to operate as is.
- **Employment Outcomes:**
 - Licensure/certification exam pass rates: Committee reflected and offered thoughts on whether or not any relevant industry certification or licensing exams and pass rates should be included to reflect relevance and success of program:
 - A list of licenses and certifications for pilots would be the target for licensure which is not listed by college publicly.
 - Matthew Harlin, an FDA examiner, has access to those numbers and can pass on the information to Orange Coast College.
 - Matthew Harlin will send that information annually for:
 - Private pilot
 - Commercial Pilot
 - And eventually for Instrument Pilot
 - Follow-up with Matthew Harlin at mattharlindpe@gmail.com to get these numbers and with Lisa Knuppel to discover where else the numbers need to be sent.
- **Employment Outcome Data**
 - Institution Set Standard

Institution Set Standard (%)	Job Placement Rate (%)			
	2016	2017	2018	2019
75%	88.23	71.43	54.55	94.44

- **Perkins Program Core Indicators (BR)** (Attached)
 - The program is doing well with technical skill attainment in traditionally underserved populations.
 - The data has not captured completions- talk about that at a later time.
 - Slight negative number in Core Indicator 3 so if you see students leaving before they finish, it would be good to reflect on that.
 - What can you do about it?
 - Analyze if it is an anomaly or a trend
 - Official data sources didn't record any employment data. The BR does not have the numbers so we have some data system problems.
 - The committee made suggestions for improvements in recruitment, instruction/retention, or job referral/placement of the special population sub-group of non-traditional (female) students and economically disadvantaged students.
 - Put a booth on campus that has organizations for women in aviation like the 99s to recruit more females to the program.
 - Make it known on the website and later in print when we are in person that there are scholarships out there for this population.
 - Good recruitment tool
 - Good information tool
 - Women in Aviation Conference is an ideal place to get word out
 - Can get a booth there for not a lot of money
 - Can be run by faculty or students
 - Reach out to the Orange County chapter of 99s Women in Aviation or the Los Angeles chapter representative, Jessica Harlin at jessicaharlin333@gmail.com, to speak on the OCC campus.

3. **Review of Last Advisory Committee Recommendations and Progress Report**

The recommendations were reviewed from the last meeting date on March 24, 2017 and the following progress was reported.

- Curriculum
 - Added an unmanned aerial systems (UAS) training program
 - Program working out well and is the most comprehensive program in the area
- New Equipment/Technology needs
 - Suggested to spend monies elsewhere than painting the planes
 - No longer have OCC owned planes
 - Monies had to be spent elsewhere
 - Investigated Donation policies and IRS ruling for potential donors
 - Refer donors to the OCC foundation's portal/website for donations
 - Donors can specify where they want the funds to go in which department
- Program Recruitment
 - Wanted a Center of Excellence to be developed for all things "Autonomous" at OCC
 - Contacted the FAA
 - Since a Center of Excellence already exists in the area, there isn't a need for one in the area at this time.
 - If that other center closes, we can revisit this idea in the future.
- Other
 - Scholarships should be awarded to pilots when they are earning a private pilot's license when it appears students need it the most.
 - We have scholarships available at OCC and from the industry.
 - Screening/application process for new students registering for flight training
 - Flight students go through a rigorous orientation at OCC that covers:
 - The time commitment needed in this rigorous program, usually around a 2-year program with flights 2x a week
 - The schedule of the lab course
 - The financial commitment and rigor needed

- Flight students go through a rigorous orientation at our training vendor, Orange County Airport
- These screenings/application processes have been working.
- Developed internship programs with local charter companies: Dispatchers, Operations, Administration, Line Personnel, Customer Service, etc.
 - Ongoing process
 - Several fixed base operators (FBOs) have moved into the local airports
 - Students getting entry level jobs through word of mouth at the FBOs.

4. Review of New Program Proposals/Developments

- The committee reviewed Existing Programs and approved the following recommendations:
 - Aviation Science
 - Total 32 units for certificate of achievement
 - 17 required units
 - 9 units for track 1 or track 11
 - 6 elective units
 - look into offering a dedicated regulations class for this program
 - Aircraft Dispatcher
 - 25-unit certificate of achievement
 - 9-unit certificate of specialization
 - Need someone to teach part of the program, part of APT A150, specific to aircraft dispatching so students can gain this certificate
 - Just need a teacher for 4 weeks of the course
 - Any leads for an aircraft dispatcher to teach the section of the course specific to aircraft dispatching, please contact sharriman2@occ.cccd.edu
 - Scott Cutshall suggested asking international handling companies like Universal whether they might be interested in devoting some of their employees' time to training since they need people to hire.
 - Airline Transport Pilot
 - Look into offering a dedicated regulations class for this program
 - Commercial Pilot
 - Look into offering a dedicated regulations class for this program
 - 12 units required and suggested 1 unit elective for commercial pilot, certificate of specialization
 - Replace ATP with Commercial ground
 - Flight Operations
 - 17 units required
 - Instrument Pilot
 - Consider adding an aviation and weather course into this to make it a higher unit certificate: APT A133 Aviation-Meteorology course making it a 9-unit certificate of specialization
 - Develop and add a course on safety, a human factors class, to the certificate
 - Private Pilot
 - 8 units required for certificate of specialization in a one semester offering
 - Potentially add a course on safety, a human factors class
 - Unmanned Aircraft Systems
 - May not have the resources to offer the courses on the list anymore;
 - Therefore, started a collaboration with robotics, electronics, film, photography and CIS for a certificate of specialization
 - 2 courses required will be taught by the Aviation Science department:
 - Introduction to Unmanned Aircraft Systems (APT A131)
 - Introduction to UAS Automation (CIS A160) since CIS doesn't have the resources to do that right now
 - Other required courses will be taught by other departments so students will have flexibility in what they want to take

- Would like to have a new remote pilot certificate of specialization- 7 units called remote pilot certificate of specialization
 - Two classes:
 - APT A131 Introduction to Unmanned Aircraft System
 - APT A160 Introduction to UAS automation
 - Could have a lab as an elective too
 - Pair it with private pilot
 - A lot of interest in the community about learning how to use drones
- Curriculum
 - FAA approval of Aircraft Dispatch Program at OCC
 - FAA approval of Unmanned Aircraft Systems training
 - Interdepartmental collaboration between ATP, CIS, Film/Photo, and Electronics to offer the most comprehensive UAS (drone) program in the region
 - Industry field work agreements with City of Irvine Agriculture, Costa Mesa PD and Fire Departments
 - Developed Flight Coordinator Program at OCC
 - Jay Arcemot is doing a great job teaching this program
 - Helps entry level aviation personnel help coordinate and schedule flights in the charter environment
 - Establishment of Bachelor satellite Program at OCC from Southern Illinois University (SUI)
 - Can get a bachelor's degree locally
 - Students pay local tuition as if living in Illinois
 - 20 or so of our students go to it each semester
 - Students can go right from our 2-year degree into this 4 year degree
 - Students can continue to work on their flight training locally and not go anywhere else while completing a bachelor's degree
 - Very positive! Great asset for OCC students
 - Awaiting FAA final approval of Part 141 Certified Ground Schools at OCC
 - Established articulation agreements with various high schools in the community: Canyon High, Costa Mesa, Edison
 - High school students fill our classrooms in the summer- have multiple sections
 - Eventually some of those students start the program in the fall which helps our matriculation
 - Established a collegiate flight team to compete nationally
 - Changes the program culture in positive way
 - Builds reputation of the program up
 - Student learn from each other and are motivated to work harder to compete
 - Thank you to administrators that help us support this team
 - Clay Lacy Scholarship has awarded 12 students in OCC piloting program (on-going)
 - Finally, in October 2020 received FAA/Department of Homeland Security approval to train international students at OCC Aviation Science Program
 - Need to set up infrastructure to handle international students
 - This group tends to have a timeline which may be contrary to our culture
 - Assisted in developing a business plan for the future of Aviation Science and in-house flight training
 - Worked with an outside consulting program
 - We can increase quality and effectiveness of this program.
 - Findings suggest the high possibility that, with the correct training, aircraft, facility, instructors, and ground personnel, the OCC Aviation Science program will be financially self-sustaining.
 - Get college to pay for the insurance

- Equipment/Facilities-
 - Acquisition of 3 Redbirds AATD's (Advanced Aviation Training Devices)
 - Simulators have been great!
 - Decreased number of hours it takes for students to get proficient in an airplane
 - Reduced overall training hours by increased the proficiency in the simulator before actually stepping into an airplane
 - Can use 2 ½ hours towards logged hours for private pilot certificate
 - Can use 20 hours for instrument training with authorized instructors
 - Reduces time and cost of going from airport out to the practice area and back
 - 40 DJI drones for use in the new UAS certificate of achievement program

5. **Work-Based Learning Opportunities**

- Overview of existing work-based learning elements of program and gaps or needs
 - Lots of Fixed-Based Operators (FBOs) at John Wayne Airport and other nearby airports
 - Still have a relationship with Lovas International, an international Charter Company
- Advisor recommendations and referrals for new internships or apprenticeship opportunities- none at this time

6. **Industry Update & Employment Trends**

- Emerging technologies and industry developments impacting instructional programs
 - Electric airplanes
 - Increased automation in cockpit is a hot topic
 - Increased reliance on automation
 - Need basics to be strong, and then go to automation down the line
 - Want pilots to have skills to hand fly and to start with hands-on basic flying skills because there can be too much reliance (over reliance) on automation
 - In the curriculum, use angle of attack indication and put students into more automated cockpits after strong hands-on basic flying training
 - Airlines want pilots hand flying so they don't lose basic flying skills
 - Flight instructors from our program commented that they had wanted more time in advanced avionics and technologies after acquiring the basic skills
 - Learning from both steam gauges and new technology training
 - Light sport aircraft role in flight training
 - UAS/Drones capabilities and performance
 - Aviation management
 - Strong group of students interested in things other than being a pilot
 - Don't just concentrate on being a pilot, want to be more than one dimensional
 - Pilots need aviation management skills to financially manage and understand the legalities of managing an aircraft.
 - Pilots often become knowledgeable in:
 - Ground operations
 - flight coordination
 - dispatch
 - Wealth of aviation management skills that students need to know to get a first aviation job:
 - Sales, marketing
 - Budgeting
 - forecasting
- **Industry** hiring practices and trends
 - Lot of unemployed pilots out there with the pandemic, and they are frightened
 - According to Boeing, decreased demand of pilots by 60,000 to 70,000 right now with the pandemic
 - Nobody is hiring

- Companies cutting costs
- Could start furloughing pilots if things don't change
- May change when vaccinations rolled out to the general public.
- Things could turn around quickly because people are tired of staying put
- Pilots trying to diversify themselves
 - Looking to become knowledgeable in the management side of things
 - Looking to be more than one dimensional like SMS, safety and security officers
- 135 still red hot- huge shortage of captains with 3000 hours with anywhere from 500 to 1000 hours

7. Summary of Recommendations

- Committee approval of existing certificate programs, including new or revised program level outcomes, curriculum, and/or program structure
 - Suggestions were made and approved to update the PLOs:
 - **Aviation Science:**
 - "Students will" develop the analytical and critical thinking skills necessary for completion of flight training and successful completion of federally administered written examinations for licensing as pilots. (Keep this part as is with the addition of "Students will")
 - "Students will" develop the analytical and critical thinking skills necessary for completion of aviation ground school academic courses giving them the background knowledge necessary to enter the air transportation industry as professionals in a non-flying occupations capacities.
 - Revise this second bullet on Aviation PLOs adding "Students will"
 - Suggested removing the words "as professionals, a, and occupations in the above text to read...enter the air transportation work force in non-flying capacities."
 - Stanley Harriman is going to work on the wording to make them more specific and to include outcome occupations.
 - The committee suggested the following occupations that go with the PLO skills in Aviation Science: ground support operations, customer service, gate attendants, marketing, sales, flight crew attendants, gate attendants and charter coordinators.
 - Add words like "baseline understanding of industry and terminology."
 - **Aircraft Dispatcher:** Students will develop the analytical and critical thinking skills necessary for completion of aircraft dispatcher training and successful completion of federally administered knowledge and practical tests "for aircraft dispatcher certification."
 - Add the words "for aircraft dispatcher certificate" at the end of the statement.
 - **Airline Transport Pilot:** Students will develop the analytical and critical thinking skills necessary for completion of flight training and successful completion of federally administered knowledge exams for "airline transport pilot certification." ~~licensing as pilots.~~
 - Add the words "aircraft transfer certificate" at the end of the statement.
 - Delete the words "licensing as pilots."
 - **Commercial Pilot:**
 - "Students will" develop the analytical and critical thinking skills necessary for completion of flight training and successful completion of federally administered written examinations for ~~licensing as pilots.~~ "commercial pilot certification."
 - Delete the words "licensing as pilots"
 - Add the words "Students will and "commercial pilot certification"

- ~~Develop the critical thinking and analytical thinking skills necessary for completion of academic courses giving them the knowledge necessary to enter the air transportation industry.~~
 - Remove this second PLO statement.
- **Flight Operations:** “Students will” develop the critical and analytical thinking skills necessary for completion of ~~federally administered knowledge tests.~~
 - “Students will develop the critical thinking and analytical thinking skills necessary for completion of **academic courses giving the knowledge necessary to enter the air transportation industry.**”
 - Delete the words “federally administered knowledge tests”
 - Replace the old PLO statement with “Students will develop the critical thinking and analytical thinking skills necessary for completion of academic courses giving the knowledge necessary to enter the air transportation industry.”
 - Suggested to add occupation title (s) rather than say air transportation industry
- **Instrument Pilot:** “Students will” develop the critical and analytical thinking skills necessary for completion of instrument flight training and successful completion of federally administered “**written examination for instrument pilot rating certification.**”
 - Remove “practical and knowledge tests for the instrument”
 - Add words “Students will” and “written examination for the instrument rating pilot certification.”
- **Private Pilot:** Students will develop the analytical and critical thinking skills necessary for completion of federally administered ~~practical and knowledge tests~~ “**for private pilot certification.**”
 - Remove the words “practical and”
 - Add the words “for private pilot certification”
- **Unmanned Aircraft Systems:** ~~Students who complete the Unmanned Aircraft Systems Certificate of Specialization will be capable of deploying and piloting unmanned aircraft systems, managing flight control systems, collecting and analyzing telemetry data, programming autonomous flight missions and securely communicating with a variety of different aircraft flying different types of missions.~~ “**Students will develop the analytical and critical thinking skills necessary for completion of UAS training and successful completion of federally administered knowledge for remote pilot certification.**”
 - Remove the existing PLO
 - Replace with words “Students will develop the analytical and critical thinking skills necessary for completion of UAS training and successful completion of federally administered knowledge for remote pilot certification.”
 - Keep the program title as is as Unmanned Aircraft Systems
- Look into adding or deleting the following courses or adding an instructor to the following programs:
 - Aviation Science
 - Look into offering a dedicated regulations class for this program
 - Aircraft Dispatcher
 - Need someone to teach part of the program, part of APT A150, specific to aircraft dispatching so students can gain this certificate
 - Airline Transport Pilot
 - Look into offering a dedicated regulations class for this program
 - Commercial Pilot
 - Look into offering a dedicated regulations class for this program
 - Replace ATP with Commercial ground

- Instrument Pilot
 - Consider adding an aviation and weather course into certificate to make it a higher unit certificate: APT A133 Aviation-Meteorology course making it a 9-unit certificate of specialization
 - Consider developing a course on safety, a human factors class for this program
 - Private Pilot
 - Potentially add a course on safety, a human factors class
 - Unmanned Aircraft Systems
 - May not have the resources to offer the courses on the list anymore;
 - Therefore, starting a collaboration with robotics, electronics, film, photography and CIS for a certificate of specialization
 - 2 courses required that will be taught by the Aviation Science department:
 - Introduction to Unmanned Aircraft Systems: APT A131
 - Introduction to UAS Automation CIS A160 since CIS doesn't have the resources to do that right now
 - Other required courses will be taught by other departments so students will have flexibility in what they want to take
 - Would like to have a new remote pilot certificate of specialization- 7 units to receive a Remote Pilot Certificate of Specialization
 - Two required classes:
 - APT A131 Introduction to Unmanned Aircraft System
 - APT A160 Introduction to UAS automation
 - Could have a lab as an elective too
 - Pair it with private pilot
- New equipment/technology
 - Facility
 - Need more space
 - Need rooms and space required for individual and simulator training and interaction
 - Hard to concentrate with how packed it is
 - Possible locations: Technology Annex (current occupants will be moving to new Consumer Health Science Building)
 - We occupy one half of the annex right now. Perhaps we could take over the other half since the flight attendants in the other half are moving.
 - Look into having a flight training center at John Wayne Airport
 - Recent business plan for the department finds a flight training center, under the correct strategy, will be financially self-sustained
 - Investigate and research if can get a spot at John Wayne Airport for in house flight training
 - Equipment
 - Look into purchasing technically advanced aircraft
 - Students will eventually encounter this technology in the workplace
 - Want to plan strategically on doing in-house types of training
 - Update current equipment standards
 - Improve the level of safety in our training
 - Want a more standardized fleet
 - Want to buy aircraft
 - May have steam gauges in the mix
 - May need college to purchase insurance
 - A continued concern exists to position this growing department for success with more skilled long-term staffing and faculty especially after the infrastructure is set up for international students. The committee unanimously supports:
 - A full-time faculty hire
 - Our numbers in the program are starting to support that

- Have the international student program approved and that will increase numbers
- Instructional assistant for pilot program needed for:
 - 50 to 60 flight students needing to keep up on their paperwork on their specialized and personal schedules and on their progress reports
 - Help with scheduling maintenance
 - Help with labs
 - Help with simulators that need updating and repair
- Instructional assistant for UAS program
 - Labs require a lot of setup times and an assistant could do that
 - Have equipment like drones that need to be registered with the FAA and need to be updated with software
- Other recommendations for program improvement

8. Closing Remarks

Thank you for your time. Thank you for sitting here for a few hours and learning about our program and for giving useful insights.