

Executive Board

Presidential Unmanned Aircraft System -UAS- Policy_Cochran to Chalfant_4_20_2017

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Chair of the Assembly of the Academic Senate
Faculty Representative to the Regents
University of California
1111 Franklin Street, 12th Floor
Oakland, California 94607-5200

August 3, 2018

**KEN SMITH, EXECUTIVE DIRECTOR
ENVIRONMENT, HEALTH, AND SAFETY**

Re: Revised Unmanned Aircraft Systems (UAS) Policy

Dear Ken:

At its July 25, 2018 meeting, the Academic Council endorsed the enclosed letter from the University Committee on Research Policy (UCORP) summarizing the committee's understanding of how UC's new Policy on Unmanned Aircraft Systems (UAS) was reviewed, and providing recommendations on moving forward.

As you know, the Senate reviewed the policy in 2017 and [expressed](#) significant concerns. UCOP revised the policy in response to those concerns and approved the final policy in February 2018, but without recirculation to the Senate. This communication breakdown was regrettable, but we appreciate your consideration of the Senate comments and your efforts to revise and clarify the policy. We understand that a UAS Advisory Committee is now being formed to study how well the policy is working. In its letter, UCORP makes several recommendations about the composition and scope of that Committee, including the need for Senate representation and a request that the results of the study be reported to UCORP in spring 2019.

Please do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Shane N. White", is written over a horizontal line.

Shane N. White, Chair
Academic Council

Encl.

Cc: President Napolitano
Director Stark
Academic Council
Senate Director Baxter
Senate Executive Directors



UNIVERSITY COMMITTEE ON RESEARCH POLICY (UCORP)
Jeffrey D. Richman, Chair
Email: jdrichman@ucsb.edu

University of California
Academic Senate
1111 Franklin Street, 12th Fl.
Oakland, California 94607-5200

July 18, 2018

SHANE WHITE
CHAIR, ACADEMIC COUNCIL

Re: Revised Unmanned Aircraft Systems (UAS) Policy

Dear Shane,

In response to your request, the University Committee on Research Policy (UCORP) has examined the new UC policy on Unmanned Aircraft Systems (UAS), commonly referred to as drones. In this letter, we summarize our understanding of how this policy was reviewed up to this point and provide specific recommendations on how to move forward. One key recommendation is that the UAS Advisory Committee, now being formed, should conduct a detailed study of how the policy is working in practice and report the results to UCORP in the spring of 2019. We also recommend that the faculty members serving on this committee should be chosen in consultation with the University Committee on Committees.

In studying these issues, we have obtained valuable input from Dr. Brandon Stark, the Director of the UC Center of Excellence on Unmanned Aircraft Systems Safety; Ken Smith, Executive Director of Environmental Health & Safety; and Professor Peter Burke (UCI), who has strong involvement and interest in UAS-related research. UCORP heard a presentation from Dr. Stark and Executive Director Smith on UAS issues at our May 2018 meeting. Dr. Stark has been extremely helpful and available for answering questions from our committee. While we have not heard a formal presentation from Professor Burke, he has provided an extensive written critique of the policy, which we have considered.

The original version of the proposed UAS policy was discussed in the Academic Council on April 26, 2017. The concerns of the Senate were compiled and also summarized in a letter from Academic Senate Chair Jim Chalfant to Vice Provost Susan Carlson on May 1, 2017. A broad range of issues was raised, but many of the concerns centered around two major objections: (1) the perceived complexity and lack of clarity in the policy and (2) the expectation that the policy would lead to unnecessary and burdensome restrictions and delays in drone-related research activities. Chair Chalfant's letter also questioned whether such a policy was even needed:

Several reviewers noted that the policy is redundant with existing FAA regulations around pilot certification and advance flight notification, and in some cases, goes beyond those requirements. At the very least, given the existing FAA regulations, the policy should make a better case for why a systemwide UC policy is needed, the additional benefits of new UC regulations, and any possible circumstance in which UC might disallow a UAS flight that the FAA has approved.

Following the Academic Senate Review, the authors of the policy made a number of improvements and clarifications, and they prepared a 19-page, point-by-point response to the concerns of the Senate. In addition to preparing the responses to the Senate, the authors of the UAS policy have also worked to further clarify its meaning by preparing a number of documents, including a Frequently Asked Questions (FAQ) document and a web page with links to relevant material:

<https://www.ucop.edu/enterprise-risk-management/resources/centers-of-excellence/unmanned-aircraft-systems-safety.html>

These resources may help to address some of the concerns of the Senate.

UCOP then revised the UAS policy, which went into effect in February 2018. It is our understanding that the new documents – the revised UAS policy, the 19-page response to Senate concerns, and the FAQ – were not circulated to the Academic Senate for reconsideration, which is regrettable.

In the spring of 2018, Professor Peter Burke of UC Irvine wrote to various members of the Academic Council, including me, to express his concerns about the new policy and to ask for guidance on how to contact UCOP policy makers to register his objections. Professor Burke provided extensive commentaries on the new policy, including a letter, dated April 5, 2018, in which he quotes the main points of Chair Chalfant's letter one by one and asserts that the new policy does not address these concerns. Professor Burke believes that the policy will strongly constrain and discourage the use and development of drones in the UC system and, as such, represents a major impediment to research in this area.

As we have noted, Chair Chalfant's letter questioned whether a systemwide UC policy on drones, beyond conformity to FAA regulations, is even necessary. UCORP has concluded that the operation of drones on University property or elsewhere as part of the University's research or educational missions brings potential risks, as well as other less serious impacts such as interference with other activities, along with its many research and educational benefits. The risks are not only hypothetical, and UC has experience with accidents caused by drones even under well-controlled conditions with expert operators, including a serious fire. Given the rapid expansion in the use of drones, there is a clear possibility of accidents with potential exposure to the University. Of course, many other research activities also have potential for causing accidents. But the fact that drones are used outside of controlled laboratory spaces and can interact with people and property in a wide variety of circumstances, indicates to us that a specific policy on drones is a reasonable and prudent step. Thus, UCORP believes that, on the basis of safety, security, and privacy considerations, a UC policy is justifiable as a matter of principle.

Formulating such a policy and implementing it in a way that minimizes impact on research freedom and flexibility is a significant challenge. Another challenge is the wide range of equipment and circumstances that can be involved. The technologies used in drones are evolving rapidly, and the capabilities of these systems are not by any means fixed. Safety-related policies often encounter issues related to “safety culture” and acceptance. If a set of policies is not considered practical and reasonable by the community directly involved, the policies can generate skepticism, cynicism, and non-compliance. For all of these reasons, any policy related to drones requires substantial care, communication with the user base, and appropriate updating. From our interactions with the policy developers, we believe that these points are understood and in many cases were anticipated.

Given that the policy has already been approved, UCORP has focused on providing suggestions that can help to answer key questions and reduce the uncertainties associated with major points of contention. Fortunately, the authors of the policy have developed an app-based system that appears to have the ability not only to streamline the approval process, but also to enable data collection. **We believe that, over the next year, UC should use these tools and others to perform a quantitative analysis of key issues related to UAS usage. We also believe that a survey of UAS users could provide valuable information to supplement these data. Together, this information could then be used to determine the extent to which potential problems raised by the Senate are encountered in practice.**

UCORP notes that the UAS Advisory Committee, while not yet formed, is likely to have the breadth and expertise to carry out such a study and to produce a written report that can put this discussion on an empirical foundation. We therefore make the following recommendations:

1. The UAS Advisory Committee should include members carefully selected to represent the diverse interests and concerns of faculty researchers. The selection of these members should be done in consultation with the University Committee on Committees (UCOC). Such Senate consultation would greatly contribute to the legitimacy of this representation in the eyes of the UC faculty.
2. The UAS Advisory Committee should prepare a report by spring 2019 that (a) assesses the strengths and weaknesses of the policy and (b) makes recommendations to address any weaknesses.
3. The report should include data gathered on drone usage, number and types of accidents (including level of seriousness and impacts), time required for approvals, types of approvals, the number of blanket approvals (given for an extended period of time or for multiple flights), the number of requests denied, complaints received, and campus-by-campus lessons learned in the policy implementation.
4. Going beyond the data collected as part of the policy implementation, we believe that it is important to assess the impact of the policy on research through a survey of UAS users, in which open-ended questions are included. For example, it is important to determine whether the policy is discouraging UAS-based research or whether users have suggestions on how to better implement the policy.
5. In light of these data, the report should also review the policy with respect to the concerns expressed by the Academic Senate in spring 2017.
6. UCORP also encourages the UAS Advisory Committee to explore ways in which

UAS users as a community can share information. This could be done using web-based tools or even through a workshop or conference.

The report of the UAS Advisory Committee should then be examined by interested Senate divisions and committees.

The recommendation to evaluate the performance of the UAS policy and to gather relevant data is in many ways parallel to one made by UCORP with regard to Export Control Policy. We believe that this is a useful paradigm: when a major new policy is approved and implemented, the Senate should follow up after a year to see what has been learned. For both UAS and Export Controls, the individual UC campuses have been given considerable control and responsibility for the detailed implementation of the policy within an overall framework. We believe that, in both cases, it is critical to formulate the key questions early on to ensure that the relevant data will actually be collected. In the case of Export Control Policy, UCORP has requested a report from ORGS towards the end of the 2018-2019 academic year. Our recommendation on assessing the UAS Policy leverages both the planned UAS Advisory Committee and the tools being created to implement the policy.

Please let us know if you have any further questions.

Sincerely,



Jeffrey D. Richman
Chair, University Committee on Research Policy

cc: Robert May, Academic Council Vice Chair
Hilary Baxter, Academic Senate Director
UCORP members

April 20, 2017

Jim Chalfant
Chair, Academic Council

RE: Systemwide Review: Draft Presidential Unmanned Aircraft System (UAS) Policy

Dear Jim,

The Executive Board of the UCLA Academic Senate solicited comments on the Draft Presidential Unmanned Aircraft System (UAS) Policy from the standing committees of the Senate; the individual responses from our various committees are available [online](#).

Members of the Executive Board echoed concerns raised by the various committees. Some of the concerns are as follows:

Several committees had concerns regarding the process of UC approval for using a drone. It is unclear who the designated authority is and the process for approval, including the procedure for evaluation (see Committee on Instruction and Technology (CIT) and Undergraduate Council (UgC) memos). Further, the CIT believes that the “requirement to seek university approval (when off campus) beyond what is already mandated by local and federal regulations (e.g., registration, no fly zones) seems unnecessarily onerous, and may, in fact, slow research efforts.”

The UgC “is not supportive of the proposed regulations for activities that occur off campus.” Moreover, although “the use of UAS has outpaced their regulation” the UgC “hesitate to hastily create too many levels of bureaucracy that might hamper research productivity without ample reason or justification.” The UgC also solicited feedback from the Department of Earth, Planetary, and Space Sciences (EPSS), which is included with UgC’s response.

The Graduate Council believes the impact on graduate students would make it more difficult to carry out their work.

The Executive Board appreciates the opportunity to opine. Please feel free to contact me should have any questions.

Sincerely,



Chair, UCLA Academic Senate

cc: Hilary Baxter, Executive Director, Systemwide Academic Senate
Leo Estrada, Immediate Past Chair, UCLA Academic Senate
Sandra Graham, Vice Chair/Chair-Elect, UCLA Academic Senate
Michael LaBriola, Principal Policy Analyst, Systemwide Academic Senate
Linda Mohr, Chief Administrative Officer, UCLA Academic Senate
Shane White, Vice Chair, Academic Council

April 12, 2017

To: Susan Cochran
Chair, UCLA Academic Senate

From: Ertugrul Taciroglu
Chair, Undergraduate Council

Re: Draft Presidential Unmanned Aircraft System (UAS) Policy—Systemwide Review

At its April 7, 2017 meeting, the Undergraduate Council discussed the Draft Presidential Unmanned Aircraft System Policy. At this time, the Undergraduate Council has some specific concerns regarding the suggested language and oversight structure proposed in the draft that prevent us from fully endorsing the policy as it is currently articulated.

The Council agreed that it makes sense to regulate the use of UAS at UC campuses. However, it is not supportive of the proposed regulations for activities that occur off campus. Indeed, it seems prudent to have different policies and systems in place that regulate campus-based activities and field-based activities. As with many types of emergent types of technologies that are used in research, the use of UAS has outpaced their regulation. However, we hesitate to hastily create too many levels of bureaucracy that might hamper research productivity without ample reason or justification.

The use of UAS is becoming increasingly common in field research. As with any other instrument, it is often not clear if there will be a need to use UAS until researchers arrive on site and assess the situation. While researchers should, of course, comply with all local regulations, to be forced to apply for permissions before ever venturing into the field seems overly burdensome and taxing for researchers.

The Council agreed that, before it could support an oversight structure that would govern the use of UAS (both in and out of the classroom), a clearer system of approval needs to be articulated. The Council also believes that any such policy should have separate oversight structures and approval processes that govern campus use and field use. We also solicited feedback from the Department of Earth, Planetary, and Space Sciences (EPSS), which is included as an enclosure.

If you have any questions or need additional information, please do not hesitate to contact me or Eric Wells, the Undergraduate Council Analyst (ewells@senate.ucla.edu; x51194).

Enclosure: EPSS Staff Response

cc: Eric Wells, Committee Analyst, Academic Senate

Thanks for giving us a chance to weigh in. I am already on the UC UAS drone listserv so have seen these proposed regulations already and agree with them 100%, they bring accountability to the FAA regulations for UC recreational vs. commercial use, and also personal/property protection via UC insurance policies. It basically makes clear that ANY drone operations on UC property, or for UC-related business (coursework, fieldwork, promotional video etc.) must be registered with both the FAA and the UC UAS center, and that every flight must be scheduled and approved by the latter in advance.

However... The ***most*** significant piece they didn't really cover at all is **the gray area for faculty/students/staff operating UAS inside and outside of a class**, which is already stated in this FAA memo, but must be explicitly stated in big bold text in the UC policy:

https://www.faa.gov/uas/resources/uas_regulations_policy/media/interpretation-educational-use-of-uas.pdf

Coursework that requires students to operate drones is considered "hobby or recreational use" and does not require FAA certification under part 107, and this includes only minimal use/assistance by the instructor as required for basic flight instruction. ALL other use for research outside of a specific course, whether by faculty, staff, or students, is considered non-hobby or recreational use because it is related to the compensated interests of the faculty/PI and thus falls under commercial drone use. This is why I got my FAA Part 107 license to build, test and operate Vassilis' magnetometer drone last summer. Students flying it eventually in EPSS 136C or as part of 199 student research would not need licensing. Any other use for research or testing would either require the faculty/staff/student get an FAA UAS license to fly, or be supervised by an FAA licensed drone pilot under Part 107 as "Remote Pilot-in-Command," who must be present during all flights and is ultimately the responsible party in an emergency or accident. This FAA training is absolutely necessary for safety reasons such as proper airspace use and aircraft collision avoidance, weather hazards, awareness of distance regulations concerning people/vehicles, equipment maintenance and recordkeeping, and contingency/emergency response. Not a job to be taken lightly or dumped on an unsuspecting student! Thus, to comply with federal rules, any EPSS drone fieldwork would need supervision by an FAA licensed drone pilot (e.g. me) or we have to start having faculty and grads/undergrads get licensed as soon as possible.

Since this is the legal boundary EPSS will be operating around, the UC draft drone policy must explain this licensing distinction clearly otherwise it leaves a can of worms for people to be cited by the FAA if they are caught flying outside of coursework, or lack liability coverage if someone gets hurt. Now, if the UC drone policy supersedes this FAA educational rule and covers all UC research drone use without need for FAA certification that needs to be spelled out clearly, but I don't think that is the case.

Emmanuel Masongsong
Project Specialist
Geomagnetic Drone Enhanced Survey Instrument Project (GEODESI)
UCLA Earth, Planetary, and Space Sciences
emasongsong@igpp.ucla.edu
310-691-9978

April 12, 2017

To: Susan Cochran, Chair
Academic Senate

From: Albert Courey, Chair
Committee on Teaching

Re: (Systemwide Senate Review) Draft Presidential Unmanned Aircraft System (UAS) Policy

COT received the request for comment on Draft Presidential Unmanned Aircraft System (UAS) Policy.
COT has no comment on the proposed changes.

We thank you for the opportunity to opine.

cc: Susan Cochran, Chair, Academic Senate
Leobardo F. Estrada, Immediate Past Chair, Academic Senate
Sandra Graham, Vice Chair/Chair-Elect, Academic Senate
Linda Mohr, Chief Administrative Officer, Academic Senate

March 30, 2017

Susan Cochran
Chair, UCLA Academic Senate

Re: Systemwide Review: Draft Presidential Unmanned Aircraft System Policy

Dear Professor Cochran,

Thank you for providing the Council on Research (COR) with an opportunity to comment on the Draft Presidential Unmanned Aircraft System Policy. The Council discussed the policy at its meeting on March 15, 2017.

No major issues were identified with the policy. The objective seems reasonable due to the non-violation of privacy. One member noted that there is no mention of consequences, should there be failure to comply with the rules, and recommended including an explanation of the liability.

Thank you for the opportunity to review the proposed policy. If you have any questions for us, please do not hesitate to contact me at lhavton@mednet.ucla.edu or via the Council's analyst, Elizabeth Feller, at efeller@senate.ucla.edu or x62470.

Sincerely,



Leif Havton, Chair
Council on Research

cc: Leobardo Estrada, Past Chair, Academic Senate
Elizabeth Feller, Analyst, Council on Research
Sandra Graham, Vice Chair, Academic Senate
Linda Mohr, Chief Administrative Officer, Academic Senate
Members of the Council on Research

April 11, 2017

To: Susan Cochran, Chair
Academic Senate

From: Michael Shin, Chair
Committee on Instruction and Technology

Re: (Systemwide Senate Review) Draft Presidential Unmanned Aircraft System (UAS) Policy

On behalf of the Committee on Instruction and Technology (CIT), I am writing to express faculty concerns regarding the proposed policy on unmanned aircraft systems (UAS) or 'drones.' The following issues were raised after soliciting responses from CIT committee members as well as from colleagues whom I know are currently using drones for university-related research purposes.

The main issue with the proposed policy concerns the need to obtain approval from a 'designated authority' before using a drone. Who exactly said authority is, and their respective qualifications, will certainly impact overall approval. How can a single authority be qualified to assess research programs that range from climate change to vegetation succession to the deterioration of urban infrastructure to drone choreography? Moreover, one of the key advantages of using drones in research is flexibility and rapid response. How long will approval take? What is the procedure for evaluation and what are the standards for approval?

The requirement to seek university approval beyond what is already mandated by local and federal regulations (e.g., registration, no fly zones) seems unnecessarily onerous, and may, in fact, slow research efforts. It is requested that alternative methods indemnify the University be sought.

Respectfully,



Michael E. Shin, Ph.D.
Committee on Instruction and Technology, Chair
Associate Professor of Geography

cc: Susan Cochran, Chair, Academic Senate
Leobardo F. Estrada, Immediate Past Chair, Academic Senate
Sandra Graham, Vice Chair/Chair-Elect, Academic Senate
Linda Mohr, Chief Administrative Officer, Academic Senate

March 21, 2017

To: Susan Cochran, Chair
Academic Senate

From: Lothar von Falkenhausen, Chair
Committee on International Education

Re: (Systemwide Senate Review) Draft Presidential Unmanned Aircraft System (UAS) Policy

CIE received the request for comment on Draft Presidential Unmanned Aircraft System (UAS) Policy. CIE has no comment on the proposed changes.

We thank you for the opportunity to opine.

cc: Susan Cochran, Chair, Academic Senate
Leobardo F. Estrada, Immediate Past Chair, Academic Senate
Sandra Graham, Vice Chair/Chair-Elect, Academic Senate
Linda Mohr, Chief Administrative Officer, Academic Senate

All Senate committees are welcome to opine and submit comments to the Executive Board.

Thank you in advance for your attention to this issue.

Sincerely,

Linda Mohr
Academic Senate
Chief Administrative Officer

From: Michael LaBriola [<mailto:Michael.LaBriola@ucop.edu>]

Sent: Thursday, January 26, 2017 7:57 AM

To: UCACOUN-L@LISTSERV.UCOP.EDU; David G. Kay <kay@Uci.Edu>; 'hroberts@uci.edu'; 'robert.clare@ucr.edu'; 'emacagno@ucsd.edu'; 'ebakovic@ucsd.edu'; 'bradley.queen@uci.edu'; 'jsimon@law.berkeley.edu'

Cc: Fredye Harms <Fredye.Harms@ucop.edu>; Brenda Abrams <Brenda.Abrams@ucop.edu>; Kenneth Feer <Kenneth.Feer@ucop.edu>; Miller, Joanne <Joanne.Miller@ucop.edu>; Baxter, Hilary <Hilary.Baxter@ucop.edu>; Andrea Green Rush (agreenrush@berkeley.edu) <agreenrush@berkeley.edu>; cherysa.cortez@ucr.edu; debra.blake@senate.ucsb.edu; Edwin Arevalos <emarevalo@ucdavis.edu>; Laura Martin <lmartin@ucmerced.edu>; Mohr, Linda <mohr@senate.ucla.edu>; Matthew Mednick <mmednick@ucsc.edu>; nschonfe@uci.edu; Ray Rodriguez <rrodriguez@ucsd.edu>; Todd Giedt <todd.giedt@ucsf.edu>

Subject: (Systemwide Senate Review) Draft Presidential Unmanned Aircraft System (UAS) Policy

CHAIRS OF SENATE DIVISIONS AND COMMITTEES:

On behalf of Senate Chair Jim Chalfant, I am forwarding for **systemwide Senate review** a proposed draft Presidential Unmanned Aircraft System (UAS) Policy.

Please submit comments to the Academic Senate office at SenateReview@ucop.edu by **April 19** to allow us to compile and summarize comments for the Academic Council's April 26 meeting. (Note that the Senate received an extension from the date listed below, to April 28) to As always, any committee that considers these matters outside its jurisdiction or charge may decline to comment.

Thanks very much, Michael

Michael LaBriola
Principal Policy Analyst
Systemwide Academic Senate
510.987.0162

From: Gina Durrin **On Behalf Of** Susan Carlson

Sent: Friday, January 20, 2017 5:12 PM

Dear Colleagues:

I am forwarding on behalf of Associate Vice-President & Chief Risk Officer Cheryl Lloyd, draft Presidential Unmanned Aircraft System (UAS) Policy for Systemwide Review.

Systemwide Review is a public review distributed to the Chancellors, the Director of the Lawrence Berkeley National Laboratory, and the Vice President of Agriculture and Natural Resources requesting that they inform affected

employees and the general University community about policy proposals. Systemwide Review also includes full Academic Senate review. Employees should be afforded the opportunity to review and comment on the draft policy. Attached is a Model Communication which may be used to inform non-exclusively represented employees about the draft policy. The Labor Relations Office at the Office of the President is responsible for informing bargaining units representing union membership about proposals.

Please submit your comments along with any questions you may have by **April 21, 2017** to Brandon Stark, the Systemwide Designated UAS Authority, at bstark2@ucmerced.edu.

Sincerely,

Susan Carlson
Vice Provost
Academic Personnel and Programs

Attachments: UAS Systemwide Review cover letter from AVP Lloyd
Draft Presidential Unmanned Aircraft System Policy
Justification for UAS Systemwide Policy
Model Communication