

April 4, 2017

Interim CP/EVC Herbert Lee  
Chancellor's Office

**Re: CPB Recommendations on Faculty Recruitment Requests 2017-18**

Dear Herbie,

The Committee on Planning and Budget (CPB) has reviewed the divisional Faculty Recruitment requests for 2017-2018, and has met with each Academic Dean. The call letter to the Deans indicated former EVC Galloway's intention to fund between 12 and 16 FTE. Of these, between four and eight have been pre-allocated to BSOE, between three and seven to Physical and Biological Sciences, between zero and two to Social Sciences, and between zero and one each to Humanities and Arts. We note that, based on the Office of Planning & Budget's request summary worksheet, there are currently 37 pending requests, 21 of which would require central funding. This letter includes advice on all 37 requests, as well as on requests for upgrades and start-up augmentations included in the divisional requests.

Our thinking about the FTE requests was guided by the principles outlined in the FTE call letter, and those developed by CPB previously. The main priorities we used for evaluating the requests were:

- New faculty hires should enhance the research profile of the campus by supporting significant doctoral growth (or MFA, as appropriate) in existing programs or support new programs with high growth potential.
- New faculty hires should significantly improve the educational experience of a substantial number of undergraduate students – including streamlining curricular capacity, efficiency, and innovation through use of teaching professors.

We prioritized for central funding positions that address both goals simultaneously. The Chairs of Graduate Council and the Committee on Educational Policy participated in the consultations with the deans and later met with CPB to provide their perspectives on the pros and cons of the divisional plans and their feedback on specific questions posed by CPB. We are grateful for their participation and have incorporated their feedback into our letter.

**Description of Our Internal Process**

Recommendations were generated using a three-step process:

1. In the first round, CPB worked independently with each Divisional request to assess how well each proposed hire addressed each of the two main goals of the call. The outcome of this step was three groups: the proposed hires that the committee was willing to support outright (including those that clearly address both goals), those that required further discussion, and those that the committee was unwilling to support. At this stage of the process we ignored the funding source (divisional or central, new requests or reauthorization) associated with each request.
2. In the second round we considered all proposals that merited further discussion, ignoring both funding sources and the Division behind the request. Prioritization at this point involved not only evaluating

tradeoffs between the two main goals of the proposal, but also other goals such as contributions to diversity, promotion of cross-divisional investments and collaborations, and support for areas of relative campus strength or that have been particularly depleted. We found the Physical and Biological Sciences Dean’s use of codes (1, lower-division impact; 2, upper-division impact; 3, very high Ph.D potential; 4, small size/critical gap/program stability; 5, innovations in pedagogy; 6, retain area of research excellence; 7, grow area of research excellence) in his FTE prioritization quite useful, and we adopted a slightly modified version of the code at this stage of the discussion.

- The prioritized request list was then used to generate divisional recommendations that took into consideration the ranges contained in the FTE call letter and the funding sources for each position proposed by the Deans.

For a number of centrally-funded requests we have recommended approving a recruitment authorization but have not recommended allocating a central FTE. Because authorizations are valid for two years, we hope that this will provide Divisions with additional flexibility.

**Summary of Recommendations**

Overall we have opted for a conservative recommendation involving 12 centrally funded FTE, plus central funding for two upgrades totaling the rough equivalent of a 13th FTE. Given uncertainties in terms of future budgets and future available FTEs, we have opted to recommend for central funding only those positions with the highest possible future impact. The original divisional requests, along with our recommendations, are listed below by division, in order of the priority assigned by the deans in their original requests. The rationale will be elaborated in subsequent sections of this letter. **Bold** text indicates a position supported by new central funding; all other positions are assumed to be funded by the respective division. Text in *italics* indicates a recruitment above the assistant professor level. ~~Strike through~~ positions correspond to requests that we recommend against.

Overview of CPB Recommendations	Proposed by Dean	CPB Recommendation
<p><b>Arts</b> 5 Requested 4 Recommended (2 Central)</p>	<p><i>Arts Division - Design Arts</i> <i>Arts Division - Creative Entrepreneurship</i> MUS - Transnational Musical Anthropology <i>THE - Directing/Acting</i> ART - Drawing</p>	<p><i>Arts Division - Design Arts</i> <i>Arts Division - Creative Entrepreneurship</i> MUS - Transnational Musical Anthropology THE - Directing/Acting <del>ART - Drawing</del></p>
<p><b>BSOE</b> 9 Requested 8 Recommended (7 Central)</p>	<p><b>CS - Data Science Foundations</b> <b>CE - Cyber-physical Systems</b> <b>EE - Precision Medicine</b> <b>CS - Software Foundations</b> <b>CE - Hardware Accelerators</b> <b>BME - Computational Genomics</b> <b>AMS - Statistical Methodology</b> <b>CS - Distributed Systems</b> <b>EE - Signals and Systems</b></p>	<p><b>CS - Data Science Foundations</b> <b>CE - Cyber-physical Systems</b> <b>EE - Precision Medicine</b> <b>CS - Software Foundations</b> <b>CE - Hardware Accelerators</b> <del>BME - Computational Genomics</del> <b>AMS - Statistical Methodology</b> <b>CS - Distributed Systems</b> EE - Signals and Systems</p>

<p><b>Humanities</b> 3 Requested 2 Recommended (0 Central)</p>	<p><b>LAAL - Spanish Applied Linguistics</b> FEM - Africana/Diasp/Transnational Femin WRI - LSOE</p>	<p>LAAL - Spanish Applied Linguistics FEM - Africana/Diasp/Transnational Femin <del>WRI - LSOE</del></p>
<p><b>PBSci</b> 12 Requested 8 Recommended (3 Central)</p>	<p><b>MCDB - Brain Development and Function</b> <b>EEB - Marine Mammal Biology</b> <b>METOX - Environmental Health Sciences</b> CHEM - Biomedical Chemistry <b>ASTRO - Observational Cosmology</b> MCDB - Inheritance EPS - Geophysics/Tectonics CHEM - LPSOE/LSOE <b>MATH - Theory</b> <b>PHYS - LSOE</b> OCE - Marine Geology <b>MATH - LPSOE/LSOE</b></p>	<p><b>MCDB - Brain Development and Function</b> <b>EEB - Marine Mammal Biology</b> <b>METOX - Environmental Health Sciences</b> CHEM - Biomedical Chemistry <del>ASTRO - Observational Cosmology</del> MCDB - Inheritance <del>EPS - Geophysics/Tectonics</del> CHEM - LPSOE/LSOE <del>MATH - Theory</del> <del>PHYS - LSOE</del> OCE - Marine Geology MATH - LPSOE/LSOE</p>
<p><b>Social Sciences</b> 8 Requested 6 Recommended (0 Central)</p>	<p><b>EDU - Quantitative, Open Field</b> <b>SOC - Demography</b> SOC - Policy/Inequal, Race and Ethni, Immigr PSYCH - Cognitive Psychology PSYCH - Social Psychology ECON - Applied Macro or Microeconomics ANTHR - Cultural Anthropology of Medicine POL - Non-western political and legal thought</p>	<p><i>EDU - Quantitative, Open Field</i> <del>SOC - Demography</del> SOC - Policy/Inequal, Race and Ethni, Immigr PSYCH - Cognitive Psychology PSYCH - Social Psychology ECON - Applied Macro or Microeconomics <del>ANTHR - Cultural Anthropology of Medicine</del> POL - Non-western political and legal thought</p>

**General Considerations**

A recurring theme in our discussions was coordination among divisional initiatives. In our FTE recommendation letter last year, CPB identified a number of broad areas that we believe deserve special attention, either because they are areas where existing curricular responsibilities are (or should be) shared across divisions, or areas of potential future expansion where close collaboration across divisions would allow us to make the most of necessarily limited campus resources. These areas include mathematics, statistics, biological sciences, material science, computational media (including human-computer interaction), environment and sustainability, psychology and neurobiology, language and linguistics, Latin American and Latino studies, race and ethnicity, and writing. For the purpose of this call two particular issues deserve further discussion:

1. We continue to be concerned with the lack of coordination between relevant departments with respect to proposed hires in Mathematical Sciences that results from our campus’s unusual departmental structure. Having both Physical and Biological Sciences and the School of Engineering grow their mathematics programs over the next three years as proposed in their responses to the 2017-2018 Call without sufficient coordination is likely to be more modest graduate growth and less efficient meeting of undergraduate teaching needs than we might otherwise hope for. On the one hand, extramural funding in Applied Mathematics is relatively high, but enrollments (and therefore TA resources) are quite low; on the other

hand, enrollments in Mathematics are high (although declining, in part due to the introduction of ALEKS), but extramural support for doctoral students is minimal (e.g., Dean Koch's target is less than \$2,000 per faculty on average).

2. Another area of continued concern is Biological Sciences, which similarly encompasses both PBSci and BSOE. Again, the lack of coordination necessary to balance undergraduate teaching, especially in impacted areas, with research excellence takes a toll on students and introduces inequities among faculty. As an example, in his written response to our queries, Dean Wolf asked "whether the best use of Biomolecular Engineering's interdisciplinary faculty is to teach yet more sections of 'Biology 101' or 'CS 101' as opposed to, say, focusing on providing breadth to the curriculum with more interdisciplinary, non-traditional courses." The fact is that the campus needs more sections of "Biology 101" and "CS 101" if we are going to improve the retention and graduation of our most vulnerable students, and we must balance boutique courses -- no matter how interdisciplinary and non-traditional -- with such sections. Hence, we strongly believe in equitably coordinating educational responsibilities and prioritizing resources to make this possible.

We understand that there are plans to hold a campus-wide biological sciences summit to try to improve coordination across departments and divisions. CPB strongly supports this effort and encourages the VPAA to convene the summit as soon as possible. We also strongly endorse the idea of a similar summit for mathematical sciences.

The committee was very pleased to see that the FTE call letter included metrics to support the evaluation of requests, and that Divisions were asked to generate medium-term targets that can be used for accountability purposes. With the exception of metrics on extramural support (which appear not to have been reliable this year), we were able to integrate them as part of our discussion and rationale for support. We would like to encourage the CP/EVC and P&B to continue improving the quality of the quantitative information provided to the Divisions and the Senate in support of the FTE allocation process. Two concerns related to the metrics arose during our discussion:

1. We would like to see Divisions integrate quantitative metrics more closely into the arguments in support of recruitment requests.
2. Generally speaking, a number of the targets (particularly in terms of graduate enrollments per faculty) seemed aspirational but unrealistic. It is important that Divisions come up with ambitious but realistic targets on which accountability can be built. We request that the Planning and Budget Office track the targets provided by the Divisions along with the actual values achieved, and that in the future both pieces of information be communicated to the Divisions and the Senate each year as part of the FTE allocation process.

Finally we would like to note that a number of Target of Excellence (TOE) requests were either mentioned in the Deans' responses as being linked to the approval of certain positions included in these requests, or were submitted individually but linked to the requests while CPB reviewed them. We would like to note that current campus practice, established in consultation with former EVC Galloway, is that TOE requests must be supported by divisionally-held FTEs. As you know, this principle is meant to prevent a race for off-cycle requests that would sidestep meaningful comparative review. Hence, in our review we ignored these TOE requests as a matter of policy and principle.

## **Divisional Hires**

### Arts:

The Arts Division requested 5 recruitment authorizations, 2 of them funded by centrally-allocated FTEs. This request is slightly above the maximum of one FTE in the pre-allocation, but it is consistent with what we understand to be the result of negotiations between Dean Solt and your office for a divisional startup. CPB supports 4 hires in the Arts, including 2 new central FTE and their upgrades. The committee was very excited by the vision for the Division put forward by Dean Solt and would like to support the investment required to jump-start that vision, particularly in light of her recent success raising funds from UCOP's Innovation and Entrepreneurship Initiative. However, we note that further growth will likely require the reallocation of internal resources. There is also a clear need to develop appropriate accountability metrics that will allow the campus to monitor return on this investment.

CPB recommends approval for the centrally-funded divisional appointment in Design Arts, which we feel supports the possibilities of pedagogical innovation and growing research excellence in an important new area that will open opportunities for new interdivisional collaborations. Our support extends to the upgrade of the position. During our discussion members raised concerns regarding several elements of this proposed hire: (1) its intended status as a divisional appointment; and (2) its role as founding chair for a new department that will absorb the Digital Arts and New Media and the Arts Games programs, given that the campus recently hired directors for both programs. However, we agreed that these issues (which Dean Solt should consider carefully before moving forward) can and should be separated from the need to hire in Design Arts. With regard to the mention of a potential TOE request to fill this position, we want to re-emphasize that the FTE allocation and the request for a waiver of open recruitment are separate processes. Hence, our support of an allocation of a central FTE for the Design Arts position does not imply our support for a particular waiver of open recruitment that might or might not occur in the future.

CPB also recommends approval for a centrally-funded divisional appointment in Creative Entrepreneurship, inclusive of the requested upgrade. Although CPB is generally not supportive of hiring faculty in support of notional programs, we recognize that this initiative offers significant opportunities for pedagogical innovation, student placement, and growing research excellence while also anchoring the vision for which Dean Solt was hired. However, given the potential risk of the proposal and the fact that this initiative does not appear to align with any existing (or planned!) department within the Division (as evidenced by the intended divisional appointment), we recommend that the Division use the funds to support a soft money position for three to five years, which will then be changed to a permanent tenured faculty position if the Creative Entrepreneurship program proves successful and can be integrated within the structure of the division. This would protect against a long-term commitment to a tenured ladder faculty FTE that could not easily be undone if the initiative is not successful.

CPB also recommends approval for 2 divisionally-funded positions: Music (Transnational Musical Anthropology), slated to be a hire through the President's Postdoctoral Fellowship Program, and Theater Arts (Directing & Acting). Although CPB is aware that Theater Arts and Music have limited potential to contribute to doctoral/MFA growth, both have very extensive upper division undergraduate curricula that, for the most part, are not amenable to large classes. Theater Arts, for instance, has the second highest undergraduate load per faculty in the division (~27 student

FTE per faculty FTE) and Music the second largest ratio of doctoral students to faculty (1.6). However, the committee does not support the upgrade of the Theater Arts position.

CPB does not recommend the Art (Drawing) position at this time because the Dean did not clearly articulate how this position fits within the long-term plans of the division, particularly the proposed MFA in Environmental Art and Social Practice, and whether there is any link between this hire and other key divisional priorities, such as the Design or Arts Games programs.

### Baskin School of Engineering

The Baskin School of Engineering (BSOE) requested 9 recruitment authorizations for 2017-2018, all of which were requested to be centrally funded. This request is slightly above the maximum of eight FTE pre-allocated to the Division. While CPB supports 8 recruitment authorizations out of the 9, as well as the allocation of central funding for 7 of them, we want to express our frustration at receiving requests consisting of only centrally funded hires for two years in a row. While we understand that the division might find it prudent to build-up its reserves, we would also like to see the reinvestment of its resources in support of departments that are critical to its mission.

Several of these positions provide opportunities to simultaneously achieve doctoral growth and improved undergraduate education for a large number of students. CPB supports all requested hires for the Computer Science (CS) and Computer Engineering (CE) departments. CS and CE are both significantly impacted at the undergraduate level due to increasing demand for their majors, as well as their support in providing computing service curriculum to the campus more broadly; their undergraduate workload FTE per payroll faculty FTE is high, 37 and 46 for CS and CE, respectively. For CS, the number of majors per faculty is also very high (~29 UG declared majors per permanent budgeted faculty FTE), perhaps unsustainably so. The CS and CE departments also both have a very high doctoral student-to-faculty ratio, 4.6 and 4.3, respectively, with the doctoral students being supported by TAs (generated from undergraduate enrollments) and by significant external funding. Finally, the proposed areas of hiring (CS - Data Science Foundations, CE - Cyber-physical Systems, CS - Software Foundations, CE - Hardware Accelerators, CS - Distributed Systems) are all important research topics on which the campus is well-positioned to make significant, visible research contributions, particularly given its geographic location near Silicon Valley.

Similarly, CPB supports the proposed position in Applied Mathematics and Statistics (AMS) in Statistical Methodology, which we expect will achieve both main goals of the FTE call. The departmental self-study we recently reviewed shows that the statistics group within AMS has a very high, lower-division service load, approximately 43 undergraduate FTE per payroll faculty FTE, and a high doctoral student-to-permanent faculty ratio of 4.1. Furthermore, this hire will help strengthen Data Science on our campus, an area of particular interest given our proximity to Silicon Valley.

The rationale for our support of the other three requests is more nuanced. For the Electrical Engineering department, the doctoral student-to-faculty ratio is fairly high, 4.2, but the undergraduate workload is noticeably below the campus average (UG workload FTE per faculty FTE ratio of ~14). On the other hand, the committee realizes that the absolute size of the EE faculty has shrunk substantially and that its small size has led to major curricular gaps that threaten ABET accreditation for its BS program (the only one remaining in the school). For this reason, CPB supports both proposed hires in EE: Precision Medicine and Signals and Systems. However, we only support central

funding for the highest priority position (Precision Medicine), which has greater potential for doctoral growth and extramural funding. We note that EE has suffered a recent separation (due to the retirement of Prof. Isaacson); if the situation with ABET accreditation is as critical as described by the Dean, then the division should use this position to rehire in EE as soon as possible. More generally, BSOE should quickly address the situation with its ABET accreditation. As resources flow to the CE department, it should be strongly encouraged to quickly reapply for accreditation, and the possibility of having other departments or programs accredited should also be explored so as to ensure greater flexibility in hiring decisions in the future. We look forward to getting an update from the Dean on this issue in next year's consultation.

The BME department generates significant external funding and the research carried out by its faculty is highly impactful and visible. However, its undergraduate teaching workload is low (UG workload FTE per faculty FTE ratio ~15), and our consultation with the Dean suggests that he does not see this situation changing. Further, its doctoral student-to-faculty ratio of 3.2, while not low, is at the lower end of the range within the BSOE departments and comparable to the ratio in the Molecular, Cell and Developmental Biology department (which provides most of the service curriculum in this area). Given more pressing needs elsewhere within BSOE and across the campus, CPB recommends against the request to hire in BME at this time. CPB also urges BME to play a bigger role in teaching the thousands of undergraduates in the biomedical sciences, a burden now falling mostly on other departments.

### Humanities

The Humanities Division requested 3 recruitment authorizations for 2017-2018, one to be centrally funded. CPB supports the approval of 2 of the 3 requests, but does not support the allocation of any central FTE to the Division.

CPB is disappointed that Dean Stovall did not provide, either in the divisional response to the FTE request or in his consultation with CPB, the metrics and 3-year hiring plan requested of all the divisions. Without those data and a clear articulation of how the Humanities envisions its future and its relationship to the size and shape of the campus as a whole, it is difficult to contextualize the Divisional FTE requests. In the course of CPB's discussions, it became clear that there are many ways in which the requested positions might address the primary drivers and priorities described in the EVC's FTE call; however, it is not for CPB to develop those justifications, particularly in the absence of an explicit vision for the Humanities. We hope that Dean Stovall's next FTE request will make explicit the Division's vision -- both for itself and for the campus as a whole -- and specify how that vision emerges out of the relevant metrics and the urgent and vital need for Humanities education at both the undergraduate and graduate levels.

Despite these concerns, CPB recommends that the requests for FTE in Languages and Applied Linguistics (LAAL) and Feminist Studies (FMST) be approved. The LAAL position in Spanish Applied Linguistics will build support for the new Spanish Studies major (one of the few Humanities majors with sustained growth), provide curricular infrastructure for UCSC as a Hispanic Serving Institution, and contribute to the campus's overall diversity. Undergraduate workload in Feminist Studies, although low relative to campus norms, is the the second-highest in the Humanities division (UG workload FTE per faculty FTE ratio ~19). Furthermore, the position in Africana/Diaspora/Transnational Feminisms will extend the department's existing strengths in transnational feminist studies, diversify both the undergraduate and graduate curriculum, contribute to important interdisciplinary

programs such as Critical Race and Ethnic Studies and History of Consciousness, and provide stability and leadership for the department at a critical time. CPB appreciates the urge to hire as soon as possible given these benefits; at the same time, given the department's recent external review, the committee would also support a decision to postpone this search for a year so the department can resolve some of its internal challenges, a decision which could enable Feminist Studies to recruit the strongest candidate possible.

CPB recommends against the FTE request for an LSOE in Writing at this time. We recommend against this authorization because Dean Stovall has not defined the position nor indicated how it fits within the program's broader vision. We agree with Dean Stovall that an LSOE in Writing will serve the undergraduate curriculum in significant ways, will be important for the program's leadership, and will "support the health of the curriculum." But LSOEs are not interchangeable. While CPB fully supports a replacement position to maintain the essential work of the program, the upcoming retirement of a current LSOE is not sufficient rationale. The FTE call should be an opportunity for the program to articulate its aspirations as part of the Division's overall vision and 3-year hiring plan. In the meantime, we trust that the Division will supply TAS funds to support the teaching that an LSOE would otherwise provide.

### Physical & Biological Sciences

The Physical and Biological Sciences (PBSci) has requested hiring authorization for 12 new faculty. Of these requests, 7 require central funding (5 are research faculty and 2 are L(P)SOE positions), 3 are re-authorizations for divisional FTE originally approved for the 2015-2016 cycle (2 of which are for research faculty and the 3rd is for a switch from ladder rank to L(P)SOE), and 2 positions are to be filled using other FTE held by the Division. While the hiring proposal is ambitious, the Dean has made it abundantly clear that limited start-up funds will restrict the ability of the division to carry it through. Hence, CPB recommends a tradeoff: allocate only three central FTE to the Division at this time, but provide a substantial one-time augmentation to start-ups that will allow the division to successfully carry out the smaller number of approved hires.

PBSci proposes to make two recruitments in the Molecular, Cell and Developmental Biology (MCDB) Department, one focusing on Brain Development and Function requiring central funding, and a second divisionally funded one on Inheritance. MCDB manages the second largest number of majors on campus (just barely behind Psychology) and has the highest major per faculty count (~43 majors per ladder faculty). Ratios as high as this significantly hurt the quality of undergraduate education by severely restricting opportunities for undergraduates to interact with ladder faculty and participate in research. Furthermore, the department has made great strides in growing its graduate program by doubling the number of graduate students accepted into the program in the last two years. Both of the requested ladder rank faculty positions will support the Biomedical sciences curriculum, which is required by majors not only in PBSi but also in BSOE and Social Sciences. The Brain Development position is within the subfield of neuroscience, a focus area that was strongly supported in the last external departmental review and supports curriculum and research in Psychology, Electrical Engineering, and Physics. The Inheritance position is within the subfield of stem cell research and will support the Institute for the Biology of Stem Cells, which provides core facilities for 26 faculty members from 7 departments on campus.

The PBSci request includes one position in Ecology and Evolutionary Biology with a focus on Marine Mammal Biology. Long-term members on CPB note that this position has a protracted history with the committee. In this



year's proposal, the Dean places this position as the Division's second highest priority and requests central funding. CPB agrees that this position is important for retaining an area of research excellence now that Terrie Williams has broadened the scope of her research and is no longer focusing exclusively on marine mammals. Although EEB is at or slightly above the campus median in terms of undergraduate workloads (~22 undergraduate FTE to faculty FTE and ~23 majors per faculty), this is one of the departments with the highest potential for graduate growth. Indeed, its graduate programs receive a very large number of applications and enjoy a high ratio of accepted to offered positions (76% in 2016) and faculty have (until this point) been highly successful at securing extramural support for the students. With a ratio of doctoral student-to-faculty ratio of around 3 we see a number of opportunities for the department to increase the number of admission offers to their graduate program. Hence, CPB supports this position and its funding through central allocation.

Dean Koch also proposes to hire a new faculty member in the Microbiology and Environmental Toxicology Department with a specialty in Environmental Health Sciences. PBSci supports a number of small departments, including Microbiology and Environmental Toxicology (METX), that have no undergraduate majors, but that are responsible for auxiliary teaching for degree programs run by other departments. In particular, METX plays an important role supporting the undergraduate (upper division) curriculum for MCDB majors, especially for laboratory and disciplinary communication courses that are necessarily small. There is also high potential for a hire in METX to provide support for 3 to 5 Ph.D. students. CPB agrees that this department is now critically small after a long lull in hiring and a recent retirement, and that hiring is important. The department seeks a faculty member using interdisciplinary approaches to investigate environmental stressors. CPB notes that such a researcher will have the potential for synergy with EEB and Ocean Sciences departments and supports this position being centrally funded.

PBSci seeks to recruit two faculty in the Chemistry department, one in Biomedical Chemistry and one (P)LSOE. Both positions are reauthorizations of hires whose underlying FTE were previously allocated to the Division. Chemistry is rated very high with respect to lower division undergraduate teaching (at ~42, it has the third largest ratio of undergraduate to faculty FTE), as well as graduate education (4.5 Ph.D. students/faculty). Furthermore, the Department regularly assigns their ladder faculty to teach lower division introductory courses, ensuring the consistency and quality of this curriculum. Hence, CPB strongly supports both of these hires.

One recruitment in the Ocean Sciences Department focusing on Marine Geology is requested using divisional funding. This request prompted significant discussion within the committee. CPB agrees that this subdiscipline is critically small within the department, but also notes that faculty in other departments (notably James Zachos, Andrew Fisher and Gary Griggs in EPS) can be considered marine geologists, and could teach at both the graduate and undergraduate level in this subdiscipline. Furthermore, Ocean Sciences is a department with no undergraduate major and, although the Dean points out that this faculty member's teaching interests will align with the putative Environmental Sciences major to be housed in EPS, after one year the final proposal for this major has not yet been resubmitted for review. On the other hand, CPB acknowledges that the position will support a critically small department in an area that has been depleted by the loss of Peggy Delaney to administration and Christina Ravelo to chair duties, and that the department has a stellar record of attracting and supporting graduate students (both M.S. and Ph.D.). Since the position is to be divisionally funded, CPB supports the recruitment authorization.

PBSci requests two recruitments in the Mathematics department supported by centrally allocated FTEs, one research faculty specializing in Number Theory/Algebraic Geometry, and one LSOE to help sustain the large lower division service curriculum in the department. The committee does not recommend allocating central FTEs to fund these

positions at this time. However, we do recommend approving the recruitment authorization for the LSOE position, which could then be pursued if a divisional FTE were to become available. CPB recognizes that the Mathematics department provides an invaluable service to the campus by supporting a large service curriculum on which many other departments rely. Furthermore, over the last few years the department has adapted admirably to increasing enrollment pressure by developing both online versions of oversubscribed courses that have improved efficiency in the delivery of the curriculum, and new assessment tools that have allowed students to move faster through the curriculum. These facts notwithstanding, faculty in the department appear to have very limited ability to raise extramural funds, and curricular efficiencies have the drawback of limiting the number of available teaching assistantships in the department. Both of these factors severely limit doctoral growth in the department. Furthermore, Planning and Budget data suggest that interest in the major is quite low (at ~7, Mathematics has the fourth lowest ratio of majors to ladder faculty on campus). This combination of factors makes increasing the number of research faculty in the Mathematics department a low priority. With respect to increasing capacity in the service curriculum, we believe that our existing campus resources can be leveraged in other ways to increase capacity and quality of instruction to better serve our growing number of students interested in STEM careers. The AMS department has faculty members who could surely teach lower division calculus courses. CPB appreciates that coordinating math instruction across divisions could be tricky, but believes that in the longer term, for the health of the campus, such responsibilities should be shared. Furthermore, since Applied Mathematics faculty have historically been successful at raising extramural funds, an arrangement of this type should potentiate graduate growth on campus with minimal additional investment. On the other hand, if such coordination fails, then adding a second LSOE in the Mathematics department might help address impaction on the lower-division mathematics curriculum. We hope that the VPAA takes the lead in this inter-divisional coordination along with the inter-divisional coordination required to meet the Biological Sciences curricula on campus.

Central funding for a position in Observational Cosmology in the Astronomy and Astrophysics (ASTRO) department is included in the PBSci request. In the Dean's own words, the main impact of this recruitment will be to expand an area of campus excellence. Indeed ASTRO is an internationally renowned and consistently top-ranked department. Last year CPB supported two recruitments (one divisionally and one centrally funded) in the department to help offset any negative perceptions amongst the scientific community arising from the UC Observatories turmoil. Having addressed that concern, our evaluation this year is more nuanced. Indeed, the desire to expand an area of excellence must be weighed against the needs we perceive in many other areas of campus. A detailed review of the department's metrics suggests that further recruitments do not appear to be justified. ASTRO does not offer an undergraduate major nor does it play a major role in the undergraduate service curriculum for the campus. Furthermore, although faculty in the department tend to be quite successful at raising extramural funding, they have very high start-up costs, and the ratio of 3 doctoral students per faculty is not much above the campus average (and below the target weighted division-wide average). Hence, CPB recommends against carrying out a recruitment in this area during the 2017-2018 cycle. CPB does note that the Dean expects between 2 and 3 separations for ASTRO in the near future and that it might be wise to plan in advance for those separations, but this should be done using divisional rather than central resources.

Dean Koch proposes a recruitment in the Earth and Planetary Sciences (EPS) department focusing on Geophysics/Tectonics, to be supported by a divisional provision. While the Dean argued that this subfield is critically small in EPS, it appears that Finnegan, Hourigan and Schwarz all have active research programs that encompass geophysics/tectonics. Furthermore, the metrics for the department are not particularly encouraging: the number of doctoral students in EPS (2.5 per ladder faculty) is roughly at the median for the campus, the ratio of

student FTE per faculty FTE (~12) is the third lowest on campus and the number of majors per ladder faculty (~8) is the fourth lowest. Given these numbers and the critical need for funding sources for start-up packages in the Division, we wonder if this recruitment is the best use for a divisional FTE. Moreover, over the last two years several positions were allocated to the department on the basis of the new major in Environmental Sciences, but the program has still not yet been approved. Given this combination of factors, CPB recommends withholding the recruitment authorization for this position for at least one year and until the Environmental Sciences BS is approved and becomes operational.

Finally, PBSci requests the allocation of a central FTE to support the recruitment of a (P)LSOE in the Physics department. It is argued that such a hire would bring pedagogical improvements, stabilize the curriculum, and help increase curricular capacity. While CPB agrees that these are desirable outcomes that would be facilitated by the proposed hire, we believe that similar results can be achieved by using existing campus resources. First, while we agree that an LSOE might bring in novel pedagogical perspectives, and very much appreciate the Dean's attention to such matters, we do not believe such hires should be predicated on the assumption that pedagogical innovation is the exclusive province of Teaching Professors, or that a faculty's responsibility to investigate (or practice) pedagogical developments in a field should reside with specially designated faculty. Indeed, this sort of blanket rationale about the role of LSOEs is part of what CPB objected to in the Humanities Division's request for an LSOE in Writing. Second, uniformity in the delivery of the curriculum can be achieved by close coordination across faculty and the use of shared teaching materials. Having the same lecturer teach the material every quarter facilitates coordination, but is not *sine qua non* to uniformity. Third, as Dean Koch has himself argued to us in the past, most faculty in Astronomy and Astrophysics would be well qualified to teach introductory physics courses. Given their relatively low teaching loads they represent an untapped resource that can help address capacity constraints and provide new insights into pedagogical approaches. Finally, we note that recent changes in Computer Science requirements mean that students are no longer mandated to take a year of either chemistry or physics classes; this change will very likely reduce demand because, under the current system, most engineering students elect to fulfill this requirement with Physics. This reduction could amount to as much as 70 student FTE, or 12% of the department total undergraduate enrollments for 2015-2016. Given these considerations, CPB does not support the approval of a centrally funded Physics LSOE hire at this time.

To conclude, we would like to address briefly the issue of start-up packages. As pointed out by Dean Koch, the increasing size of start-ups represents the major obstacle to continued hiring, no matter what the source for the underlying FTE. This is particularly so in disciplines that require wet labs, which tend to be overrepresented in PBSci. In the short term, we want to strongly endorse the request from Dean Koch for a one-year start-up augmentation that would allow him to conduct all the recruitments that we have recommended here. At the same time, we believe that it is necessary to reopen the discussion between the Deans and the central administration on start-up funding formulae, and we welcome an opportunity to participate in such discussions.

### Social Sciences

The Social Sciences Dean has requested authorization for 8 hires for 2017-2018. Central funding has been requested for two of these positions. Authorization to hire at a senior level was requested for both of the centrally funded hires. CPB supports 6 of the 8 requested hires in the Social Sciences; these requests target departments with high workload ratios and have the most promise for doctoral growth. CPB does not support central funding for any of these positions or their upgrades. Instead, CPB recommends that the 6 divisional positions the Dean requested be employed for the 6 positions supported by CPB, and that any upgrades be divisionally funded.

The Dean has requested a senior position in Quantitative Methods in the Education Department on the grounds that it will help restore program stability, provide leadership to the department, strengthen quantitative expertise, and support the recently revised Ph.D. program. The focus on quantitative methods was identified as a need by the department's recent external review and endorsed by the department's faculty in their response to the review. CPB supports authorizing a recruitment in this area as well as the request to upgrade this position to Full Professor. This upgrade is appropriate to meet the objective of strengthening the department's leadership as it emerges from receivership. However, just as in the case of the Feminist Studies request in the Humanities Division, the desire/need to bring in senior leadership as soon as possible should be balanced by the department's recent history of receivership, which may be an argument for postponing this search for a year. A one-year delay could put Education in a better position to recruit the strongest candidate possible. Please note that we do not support the investment of central resources to support this hire. Although the Education Department is home to a relatively large terminal MA/C program that has recently been revised, it does not host a major and has a very low ratio of student FTE to faculty FTE (in fact, the second lowest on campus after the Writing Program, which exclusively teaches via small seminars), and at a doctoral students-to-faculty ratio of ~2.1 and only 33 applications to the program in 2016, limited opportunities for doctoral growth.

The Dean also requests two positions in the Sociology department, a junior one focusing on issues of inequality, race, ethnicity, and immigration, and a senior one with a quantitative focus on demography and migration to serve as Director of the planned M.S. program in Quantitative Data Analysis in the Social Sciences (QDASS). Although the number of doctoral students per faculty at ~ 2.2 is not particularly high, Sociology is a relatively small department with a very high workload per faculty (~30 student FTE per faculty FTE and ~ 37 majors per faculty); additional hires are sorely needed. Hence, we support without hesitation the requested junior hire in Policy/Inequality, Race and Ethnicity, Immigration (Dean's priority number 3), which will serve to strengthen research on these important topics while also addressing enrollment pressures at the upper division level. Furthermore, CPB supports the request to hire a candidate who would employ and teach quantitative methodologies, thereby adding strength to the doctoral program and providing potential synergies in terms of both research fields and methodologies with other initiatives in the division. On the other hand, we do not support the hire of a senior faculty member in the department to serve as Director of QDASS. As we strongly expressed in our letter last year, CPB sees "the recruitment of program directors as premature and potentially questionable." We continue to recommend that requests for FTE to support Masters programs at very early pre-proposal stages not be allocated. In the case of the Social Sciences Division in particular, we have yet to see draft proposals for either the MS in Quantitative Analysis in the Social Sciences or the MA in Social Sciences and Policy. We understand that two faculty in the division are taking the lead in developing proposals for these two possible Masters programs, and we look forward to the opportunity to provide feedback. Furthermore, the Division made a senior hire a few years ago to provide leadership in quantitative analysis through the Center for Statistical Analysis in the Social Sciences (CSASS); the hire of a second senior faculty to lead activities in the same area appears inappropriate given the limited resources available to the Division and the fact that there is not yet even a pre-proposal for the QDASS M.S.

The Dean proposes to hire two faculty in the Psychology department, one specializing in Cognitive Psychology and one specializing in Social Psychology. Psychology is home to the largest undergraduate major on campus and ranks second highest on campus in both the ratio of majors per faculty and the ratio of student FTE to faculty FTE. Although at 2.3 the ratio of doctoral students per faculty is not particularly high, we strongly support these hires as

a way to improve the educational experience of a substantial number of undergraduate students. In order to increase doctoral enrollments in the department, we would like to encourage Psychology to focus these searches in sub-disciplines with the highest potential to raise extramural support.

A recruitment in the Economics department with a focus on either applied macroeconomics or applied microeconomics is also included in the 2017-2018 request from the Social Sciences. Economics has an undergraduate workload that is among the highest on campus (~32 undergraduate FTE per faculty FTE and ~40 majors per faculty), and at 2.7 doctoral students and 2.3 MS students per faculty, the highest graduate enrollments per faculty in the division. CPB agrees with the proposed strategy of defining the specific focus for the recruitment (applied macro or applied micro) once the outcomes of this year's recruitment cycle are known. Hires in either area will help address issues related to the department's high undergraduate workload, stimulate enrollment growth at the doctoral level, and contribute to expanding capacity in the successful M.S. in Applied Economics and Finance professional program, a program that has helped the department generate additional TA positions to fund doctoral students.

A recruitment in the Politics department focusing on Non-Western political and legal thought is also being proposed. At ~39, Politics has the fourth highest ratio of student FTE per faculty FTE on campus. It also manages ~33 majors per faculty and at 2.5 it has the second highest number of doctoral students per faculty in the Division. This recruitment would also strengthen the connections between the Politics programs and LGST, diversify the curriculum in legal theory, and promote growth in the doctoral program. Hence, CPB strongly supports this request.

Finally, the Dean proposes a recruitment in the Anthropology department specializing in Cultural Anthropology of Medicine and New Publics. The Anthropology department runs highly regarded undergraduate and graduate programs with very strong national and international reputations. Furthermore, the focus on Anthropology of Medicine and/or New Publics is extremely timely. However, the committee does not recommend the request for a position at this time because it fails to address either of the two primary criteria of the FTE – improved undergraduate experience and doctoral growth – as effectively as the other requested FTEs. Appendix A of the Dean's request (p. 37) shows that the undergraduate workload for Anthropology is significantly below that of Economics, Psychology, Politics, and Sociology. We also note that the workload has been decreasing over the years. In addition, the number of doctoral students per faculty is below that of all other programs in the Social Sciences except the new program in LALS. While recognizing the strong research reputation of the department, CPB believes an additional faculty hire would not address the workload issues the division faces as effectively as other requested hires, and that the gains such a hire would represent for the department do not offset the need for caution in apportioning the limited FTE the campus has available to assign.

We want to close our discussion of the Social Sciences Division by noting that CPB is extremely concerned about the financial health of this unit. Although some savings have been recently generated by the restructuring of the Education MA/C program, the savings represented by those 4.5 assistant-level FTE are unlikely to be sufficient to cover all the financial commitments that Social Sciences will face in the next few years. The division faces a number of challenges. These include a Teaching Assistant-to-undergraduate student ratio that is around 50% lower than that in other divisions (which negatively impacts the quality of undergraduate education and reduces the ability of departments to support graduate students); a high number of appointments generated by the Presidential Postdoctoral Fellows program that will need to be repaid in the next two to three years; and the need to rebuild an

Education department that has shrunk substantially. While the Division may need some central help to address these challenges, we also see the need for some painful but inevitable tradeoffs that an incoming Dean will be forced to face unless the current Divisional leadership addresses them now.

Sincerely,

A handwritten signature in black ink, appearing to read 'Abel Rodriguez', written in a cursive style.

Abel Rodriguez, Chair  
Committee on Planning and Budget

cc: Academic Deans  
Chancellor Blumenthal  
VC Delaney  
Acting VPAA Berger  
VPDGS Miller  
VPDUE Hughey  
Interim VPSS Padgett  
GC Chair Smith  
Interim AVC McClintock  
Analyst Brondarbit