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SUBJECT: Recommendations from the Senate-Administration Workgroup on Graduate Funding

### Charge

The Senate-Administration Workgroup on Graduate Funding (referred to as the Workgroup) was assembled in 2018 to evaluate the funding mechanisms for graduate students. The Workgroup considered PhD and MFA students and was charged with the following:

- TA allocation formula. It may be beneficial to move from the current department-based TA to student ratio for TA allocation to a course-based TA to student ratio, which may provide more commensurate levels of support for courses that depend on a more or less generous TA to student ratio to advance undergraduate student success. We request the Workgroup provide input on this concept, offer guidance on how to identify courses that should receive greater TA support, and advise on principles of possible new TA allocation methods.
- Block grant allocation formula. It is unclear if the current block grant allocation formula provides sufficient supplemental support for all programs, or that it has appropriate target support levels and deductions for departmental resources. We request that the Workgroup provide advice on either modification to the existing block grant formula, or moving away from the block grant model to a model based on pedagogically appropriate mixes of TA and fellowship support for defined cohort sizes in each program.

### Structure of the Workgroup

The Workgroup was comprised of 16 members and 4 support staff. We held four meetings in Fall 2018 and Winter 2019. After these four meetings, it was decided that the Workgroup would be divided into two subgroups, one would focus on TA allocation and the other would consider block grant allocation; this subdivision enabled a more focused analysis of the respective topics. Each subgroup met five times throughout Winter-Spring 2019, followed by a final combined Workgroup meeting in June, 2019. Thus, a total of 15 meetings was held by the

Workgroup and subgroups in 2018-2019. Five members of the Workgroup participated in both subgroups to ensure overlap and communication between the two subgroups and also to provide balanced divisional representation.

## **Process**

### Initial survey

During the initial four meetings of the Workgroup, a general survey was developed and launched to all graduate programs to assess the state of affairs, including deficiencies and desires in terms of graduate student support, of each program.

### TA allocation subgroup

This subgroup focused on the two variables in the current TA formula: PRC ratio and faculty debit. To assess alternatives to the current PRC ratio, the subgroup developed and launched a survey that sought data from each department/program that was allotted TA resources from Campus in 2017-18. The goal of the survey was to understand the TA needs directly from each department/program. This survey was in the form of a spreadsheet that listed every course offered by the department/program, the enrollment for that course, and the utilized TA resources for that course in 2017-18. Two key pieces of information were sought from each department/program: (1) classification of each course as *Intense*, *Standard*, *Light*, or *No TA* in terms of TA effort (we provided definitions of these terms, e.g. number of contact hours and nature of class assignments, for each category); and (2) the preferred number of TAs/tutors/readers for that course based on the enrollment distribution of 2017-18. These data from all the departments/programs were fed into different models that we considered. We also considered a formula that moves away from faculty debit and towards course debit. These considerations led to a convergence of the final recommendation from this Workgroup.

### Block grant allocation subgroup

This subgroup agreed that the current formula for block grant allocation is too complicated and is not transparent in terms of distribution of resources. It was decided that a new model or formula should be developed from scratch, one that is simpler and more intuitive than the existing formula. In the data-collecting stage, the subgroup considered the method of block grant allocation from five other UCs and analyzed the current funding situation, e.g. graduate student stipends broken down by division/department/program and distribution of funding sources for students (TAships vs. block grant vs. fellowships). The subgroup developed a list of the goals that should, in principle, be taken into account for block grant allocation:

1. Support PhD and MFA students
2. Increase the number of PhD and MFA students
3. Increase the quality of PhD and MFA students
4. Improve the time to degree (and/or enforce current time limits)
5. Grow interdisciplinary programs (or consider a separate funding stream)
6. Reduce stress for students and improve their well being
7. Enhance the diversity of the graduate student body

The final recommendation from our Workgroup simplifies the method for block grant allocation, and hopefully meets the goals above on an immediate or long-term timescale.

## Recommendations

In this summary, “department” refers to the department/program that receives TA resources (TA allocation), or that the graduate student is registered with (block grant allocation):

### TA Allocation

The goal is to provide equitable instructional assistance (IA) support to undergraduate courses and equitable workloads for TAs. We recommend that the current TA allocation formula continue to be utilized, but with the modification that the denominator *PRC ratio* be replaced by a new term, the *weighted TA Load* (denoted  $TALoad_{weighted}$ ). The equation thus becomes:

$$TA\ FTE = 90\% \frac{\text{enrollment} - \text{faculty debit}}{TALoad_{weighted} \times 2}$$

*Enrollment* remains the average 3-quarter enrollment for the department.

*Faculty debit*<sup>a</sup> remains the number of instructor FTEs (permanent and temporary) x 20<sup>b</sup>.

$TALoad_{weighted}$  is a single value for a given department, and is the average, weighted number of undergraduate students per one 50% TA FTE. Determination of this value requires data from each department:

- Designation of each class as *Intense*, *Standard*, and *Light* in terms of TA workload. Guidelines, which can be determined by an appropriate group at a later time, should be provided to define these designations. In our survey, we provided the following:
  - Intensive TA load could describe lab, project-based, writing-intensive, and language courses. Characteristics of an intensive TA load could be significant contact hours ( $\geq 8$  hrs/week), extensive feedback to students ( $\geq 30$  pages of original writing during the quarter, e.g. lab report, paper), close one-on-one or group mentoring (e.g. conversational emphasis,  $\geq 3$  class projects), practicum. Suggested ratio is  $\leq 24$  students per TA, one discussion section or lab per TA.
  - Standard load is typical and could describe a large ( $\geq 200$  students) lecture course with minimal assessments (e.g. Scantron exams), or a medium (50-199 students) lecture course with moderate assessments (e.g. weekly quizzes, short writing assignments/exams). Characteristics include typical contact hours (3-7 hrs/week), moderate feedback (10-29 pages of writing), and moderate mentoring (1-2 class projects). Suggested ratio is 25-60 students per TA (1-2 sections per TA).
  - Light load could describe a small lecture course (20-49 students) with moderate assessments (e.g. weekly quizzes, short writing assignments, free-response

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<sup>a</sup>Course debit instead of faculty debit was attempted in the model. Course debit is defined as the number of courses (with enrollment of at least 12) in a department x enrollment debit, where enrollment debit is the maximum number of students in a class that does not justify a TA. We applied an enrollment debit value of 20, which means that a class with 20 or fewer students does not require a TA. With this enrollment debit, the number of TA FTEs using course debit was nearly identical to the result using faculty debit. We also utilized variable enrollment debit of 12 (upper-division courses) and 20 (lower-division courses), and these values increased the number of TA FTEs.

<sup>b</sup>The current model assumes that a faculty member can manage 20 students without a TA. This value of 20 is the enrollment debit and does not take into account the nature of the course. We performed the calculation with variable values of enrollment debit of 5, 20, and 30 for intense, standard, and light courses and the TA FTE generally increased according to the equation.

exams) or a medium lecture course with minimal assessments (e.g. Scantron exams). Characteristics include typical contact hours (3-7 hrs/week), minimal feedback (< 10 pages of writing), and minimal mentoring (no class projects). Suggested ratio is 61-90 students per TA (2-3 sections per TA).

- Average number of undergraduate students per 50% TA FTE for the *Intense*, *Standard*, and *Light* courses in the department. This number is called the *TALoad*, and there are three values of *TALoad* for the three types of courses of *Intense*, *Standard*, and *Light*:  $TALoad_{Int}$ ,  $TALoad_{Stand}$ , and  $TALoad_{Light}$ . These values are defined by and specific to the department.
- The fraction, or weight, of *Intense*, *Standard*, and *Light* courses relative to all courses in the department:  $weight_{Int}$ ,  $weight_{Stand}$ , and  $weight_{Light}$ . These weights are the fractional population of students in each type of course, e.g.

$$weight_{Int} = \frac{\text{number of students enrolled in intensive courses in Dept } X}{\text{number of students enrolled in all courses in Dept } X}$$

The weighted, average *TALoad* can now be calculated:  $TALoad_{weighted,Dept X} =$

$$\frac{1}{\left( weight_{Int} \times \frac{1}{TALoad_{Int}} \right) + \left( weight_{Stand} \times \frac{1}{TALoad_{Stand}} \right) + \left( weight_{Light} \times \frac{1}{TALoad_{Light}} \right)}$$

The TA allocation subgroup collected preliminary data from more than half the departments we queried; these departments make up 89% of the total enrollment in 2017-2018 and 84% of the TA FTEs that were allotted in 2017-2018. The preliminary data indicated that the new model is realistic and would not require an unreasonably large increase in available resources. It should be noted that the value of 90% that is currently in front of the equation for TA FTEs is an empirical adjustment factor and could be further adjusted (or eliminated) as needed.

**The Workgroup believes that this new model for TA allocation eliminates the historical PRC ratio that no longer reflects the needs of each department, and replaces it with a new value  $TALoad_{weighted}$  that is determined in partnership with the department, and most importantly, that reflects the realistic and unique needs of every department.**

Moving forward, we suggest that as earliest as possible, ideally by Fall 2019, Campus collects more refined data to determine  $TALoad_{weighted}$  for each department. By Fall 2020, the new TA allocation can go into effect, in time to impact graduate admissions and recruiting that will take place in 2020-2021. The values for  $TALoad_{weighted}$  should be assessed in a cyclical basis, perhaps every 5 years or with every program review (7-8 years).

### Block Grant Allocation

The goal of the block grant allocation is to provide each PhD and MFA student with guaranteed one-year support, and potential support for a second year. Hence, we call this the “One-plus” model. The total number of years of support, which is a value  $Y$  ( $Y$  is between 1.0 and 2.0), will take into account several factors, including the outcome of the graduate program review, the attrition rate, and average number of TAships per student in a given department. We anticipate

that this value  $Y$  will be closer to 2 for departments that historically have limited extramural funding, rely heavily on TAs, and have low attrition rate. The assumption is that PhD students will require six years to complete their graduate study (including the time to earn their Master's degree at UCSD); likewise MFAs will take three years to earn the terminal degree.

The calculation is simple and transparent.

- Year One Allocation: Determine the enrollment average over a 3-year period of the number of PhD (MFA) students registered within the department who are under the 6-year (3-year) threshold; in this determination, we exclude students in their 7<sup>th</sup>+ year (PhD) and 4<sup>th</sup>+ year (MFA). These enrollment averages are  $n_{PhD}$  and  $n_{MFA}$ . The purpose of relying on a 3-year average is to buffer the year-to-year statistical variations while allowing for growth of a program. The anticipated number of first year PhD students is  $n_{PhD}^{1st\ year} = \frac{n_{PhD}}{6}$  and for MFA students is  $n_{MFA}^{1st\ year} = \frac{n_{MFA}}{3}$ . This number of PhD (MFA) students determines the block grant allocation for the nominal 1<sup>st</sup> year enrollment of all the students. However, departments and programs may utilize this “Year One” allocation in a manner that is consistent with the expectations and needs of the program, e.g. they may choose to support students in the 2<sup>nd</sup> year enrollment of all students if there are other sources of funding and program commitments in the 1<sup>st</sup> year.
- Year Two Allocation: The Workgroup did not specify the detailed criteria that would determine the amount of block grant for Year Two. We anticipate the number of quarters on TAs, attrition rate, and outcome from Program Reviews will be major factors. For example, one possible process is the following: Graduate Division could determine the number of students that have relied on employment as an IA (e.g. TA, reader, or tutor) and/or have been self-funded (no block grant, IA employment, GSR appointment, or fellowships) as the primary source of stipend for at least  $X$  quarters, where the value of  $X$  and the definition of “primary” would need to be determined. The number of students who meet these criteria is  $n_{PhD}^{YearTwo}$  and  $n_{MFA}^{YearTwo}$ . The sum of students,  $n_{PhD}^{1st\ year} + n_{PhD}^{YearTwo}$ , plus a factor that reflects attrition and the Program Review, could be equal to the number of 50% GSR-equivalent appointments allotted to the department in the form of block grant; this allotment would be reflected in the value  $Y$ . The department would decide how/when funding associated with Year Two should be utilized, e.g. the dissertation or candidacy year, during field work, etc.
- Departments may submit requests for exception to the number of students supported on block grant. For example, departments that project rapid growth and cannot rely on 3-year averages should review their plan with the Division Dean and Graduate Dean. Additional information, such as Program Review outcomes, will be taken into account.

**This new “One-plus” model is simple and has an equally simple philosophy: block grant allocation is determined by the average number of first-year students in a department, plus potential support for Year Two. Support in Year Two should be determined by a set of criteria that takes into account the funding history of the students, e.g. number of quarters with IA employment, as well as attrition and outcomes from the Program Review.**

### Allocation of funds, level of support, and interdisciplinary programs

Each department will be provided with funds,  $P$ , which is the product of the annual in-state tuition and the sum of the 50% TA FTEs and 50% GSR-equivalent appointments from block grant. The funding  $P$  can only be used for in-state tuition/fee support of students on TAships and/or block grant, and in-state tuition for recipients of fellowships with insufficient tuition-fee support. There is no annual carry-forward for  $P$ ; unused  $P$  will be returned to Campus.

An important priority is to provide 50%TA equivalent financial support to all eligible students. The department will be required to appoint PhD/MFA students to IA/GSR positions at the 50% level. Requests for exceptions will be reviewed by the Graduate Dean.

Financial support should be allocated from the home department of the graduate students regardless of their selected field of study. Interdisciplinary research programs are vital to the research prominence of UC San Diego, and most of them currently do not receive block grant of TA allocation. We encourage the interdisciplinary programs to seek extramural funding support for graduate students, and we are in favor of augmenting PhD/MFA support for students in interdisciplinary programs through block grant and TA allocations to the home department. We recommend a future workgroup to consider criteria for providing block grant support for interdisciplinary programs which can be adjusted as a result of program reviews.

**In summary**, we believe that these changes to the funding model for graduate programs will have a transformative effect in terms of funding and morale for graduate programs. The TA allocation model is collaborative, where the explicit needs for each department determine the TA resources. The block grant allocation is intuitive and transparent, with a mechanism built in to provide up to 2-years of support for students and departments in need.

Respectfully submitted,

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