

**UNIVERSITY GRANTS ACADEMY AY 16-17**

**FINAL EVALUATION REPORT**

**Amy D'Andrade  
UGA Director**

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## INTRODUCTION

The University Grants Academy (UGA) was funded in AY 15-16 by the Provost's RSCA Infusion funds. Of the \$1.5 million dollars allocated for the Infusion, \$500,000 was reserved for Central RSCA investments, and \$200,000 of this was budgeted for the UGA. This report provides an evaluation of the UGA program. The report is divided into two parts. Part One considers the effectiveness of the UGA program overall, based on participant perspectives and outcomes. Part Two considers program processes, describing UGA implementation and identifying strengths and weaknesses of program components. The report concludes with recommendations for changes to the UGA. A proposed curriculum incorporating those recommendations is provided as a separate document. Data informing this report are drawn from a participant survey, program outcomes, experiences of the director and facilitator, and a debrief meeting held in mid-June to gather perspectives from collaborating partners including representatives from the Office of Research, the Tower Foundation/University Advancement, the Research Foundation, facilitators, and mentors.

### **Brief Program Description**

The purpose of the UGA was to support a group of faculty through the process of writing and submitting a grant proposal for external funding for RSCA. The program consisted of a set of information sessions in the Fall semester, and a Spring program consisting of 20% assigned time awards for faculty participants to focus on grant writing, working sessions, sequenced assignments, reviews of proposal drafts by internal scholars and external experts, mentoring by successful SJSU grant writers, and editing and statistical consulting as needed. Twenty-five faculty were selected to participate in the program in two cohorts. Two faculty with grant writing experience were hired to serve as cohort facilitators, one of whom also served as program director. Canvas was used to organize presentations and assignments. The program was based on the understanding that grant writing is a time-intensive and complex endeavor, and the belief that for new grant writers it can be most effectively facilitated with wrap-around support.

## PART ONE: EFFECTIVENESS

### **Perceived Value of the UGA**

#### Fall UGA-developed RSCA information sessions.

A series of information sessions on grant writing was held in the Fall term, developed by the UGA director in collaboration with the Center for Faculty Development (CFD), the Office of Research (OR), the Tower Foundation/University Advancement, and the Research Foundation (RF). These sessions were open to the entire campus community, and UGA participants were required to attend three or more of these sessions or other RSCA-related sessions offered by the RF or the OR.

To assess the value of the fall sessions, attendance was tracked and an on-line survey was sent to attendees after each session. The survey asked participants to assess the value of the session they attended on a scale of 1-5, where 1 represented "very poor use of my time" and 5 represented "very valuable use of my time." Several questions allowed for open-ended responses describing the participant's experience and any suggestions for improvements. Response rates for each of the surveys (based on in-person attendance) varied between 50-90% with an average response rate of 65%.

In general, the fall sessions appeared to achieve their intent in providing useful information about grant writing to the general campus community. Sessions were well attended and scale scores for most sessions were high, averaging over 4.4 out of the 5 point scale.

Session Title	Date	# Attending In-person	# Requesting Web Ex invite	# Requesting Recording	Survey Score
Moving from idea to proposal	10/2/15	10	-- na --	-- na --	4.9 (n=7)
What you need to know about budgets	10/21/15	14	13	7	4.4 (n=8)
Local and State governments as RSCA funders	11/9/15	19	7	6	3.9 (n=13)
Foundations as RSCA funders	11/17/15	10	5	2	4.8 (n=5)
The federal government as RSCA funder	11/18/15	10	8	3	4.4 (n=9)
Understanding the proposal review process	12/9/15	18	6	4	4.5 (n=10)

Comments suggest attendees appreciated the content, and many offered suggestions for changes. These suggestions will be summarized and addressed in the next section. A few sample comments are provided below.

“...Helped me to better understand what one should consider when planning the budget as well as what should be included in the budget.”

“Information on GRC and SPIN was helpful. I was not aware of these resources and after the session, I was able to sign up.”

#### Spring UGA program

The bulk of the UGA occurred in the Spring semester, during which UGA participants received assigned time and various supports. To assess the value of the Spring UGA program, an anonymous on-line survey was sent to attendees after the conclusion of the program. The survey asked participants to assess the value of each component of the UGA and the UGA overall on a scale from 1 (of no value to me) to 4 (of great value to me). They were also asked to rate their ability before and after the UGA to perform critical steps in the grant writing process, whether they accomplished what they hoped, to describe their experience, and to suggest improvements to the program. The survey response rate was 92%. See Appendix 1-A for survey questions and full results.

*Participants perceived the UGA experience as very beneficial.* With the exception of the editing service, all elements of the Spring UGA program received average ratings of 3.33 or higher, and the UGA overall received an average score of 3.87. Program components perceived to be most valuable were the assigned time, the reviews of proposals by external expert scholars, and the assignments with sequenced deadlines.

UGA Program Component	Average score
Assigned time of 0.2	3.91
External expert scholar review	3.89
Assignments with sequenced deadlines	3.61
Internal senior scholar review	3.40
Spring working sessions	3.35
Peer review	3.29
Statistical consultation	3.33
Fall information sessions	3.25
Editing service	3.00
<b>UGA Overall</b>	<b>3.87</b>

*Participants believe their grant writing skills improved through the program.* Participants were asked to rate their abilities after and before the UGA on five grant writing steps on a scale of 1-4, where 1 represented “not at all capable” and 4 represented “completely capable.” After the UGA, the majority of participants considered themselves “completely capable” of locating a funder, drafting a budget, and writing a strong proposal narrative; and over 40% considered themselves completely capable of completing the submission/routing process, while much lower percentages rated themselves as having these skills before the UGA. Average scale scores for each step improved by about 1 full scale score.

Grant writing Step	Average perceived ability before UGA	Average perceived ability after UGA	Average per-participant gain
Locate potential funders for a project	2.52	3.52	1.00
Complete a budget and budget justification	2.27	3.48	1.27
Communicate with funding program officer	2.04	3.04	1.00
Complete the routing/submission process	2.09	3.26	1.17

*Participants felt they made good use of the time.* Participants were asked whether they accomplished as much as they hoped to in the UGA; almost three-quarters reported they had. Those that did not ascribed their lack of progress to excessive service or teaching responsibilities, or a need for greater structure or more feedback on early drafts of their proposals.

*Participants liked the program.* Qualitative comments describing the experience were consistently and enthusiastically positive:

“An amazing experience.”

“This is an absolutely necessary opportunity for young faculty.”

“Very impactful.”

“Extremely supportive and highly informative in so many ways!”

“Most useful and comprehensive resource this campus has ever provided to help its faculty write successful proposals for external funding.”

A number of comments suggest that the UGA gave participants a new sense of feeling connected to and supported by the university.

“The UGA is a tremendous opportunity to develop as a scholar with the support of the university. It is something that I felt was missing when I first arrived...”

“I am extremely encouraged and pleased to see the University supporting faculty grant writing in this way.”

“I am grateful to ... the university for this wonderful resource.”

“Thank you to everyone who volunteered their time to make the UGA successful and to SJSU for committing resources to supporting faculty in this way. It greatly strengthened my commitment to the university.”

Other comments emphasize the value participants placed on aspects of the program, such as its structured nature:

“At first, I thought that all of the assignments were a bit too much but without those structure (including assignments), I don't think that I was able to complete my grant proposal as planned.”

“It really pushed me to do what I wanted to do; to put together a complete draft of my proposal, something I might not have gotten the chance to accomplish with my regular load during the semester and might have postponed again and again.”

“The homework assignments with deadline felt like a little push but I think some extent of compulsion is necessary; without deadlines, I think I couldn't finish writing the initial draft. After finishing one full initial proposal draft, now I feel more confident with the proposal writing.”

...And the community of campus scholars and supporters to which participants were introduced:

“...being surrounded by others interested in research was such a positive experience.”

“UGA gave me access to the incredible community of research-active faculty and administrators across SJSU. Not only did I learn a lot from these individuals, but I also got a glimpse of their perspective...”

Participants expressed the desire to see the program continue to benefit others:

“I really hope you can continue it in the future. I would recommend it to all junior faculty in my department.”

“I wish all of my colleagues had an opportunity to participate in the program. “

“Expand the program. It's great.”

Many participants provided thoughtful suggestions for how the UGA could be improved. These emphasized the need for even greater structure and/or accountability, information in advance about assignment deadlines, more writing sessions, and less informational content. These will be reviewed in Part Two of the report.

## **Outcomes of the UGA**

### Proposal Completion and Proposal Submission Rate

Twenty of the 25 participants (80%) completed a submission-ready draft of a grant proposal for submission to an identified external funder by the end of the semester. As of June 30, five participants (20%) formally submitted their proposals to external funders.<sup>1</sup> The submission rate is expected to increase over 2016 as submission windows for identified funders are reached. See Appendix 1-B for a table of UGA proposal titles and authors, completion and submission status, and anticipated submission dates.

### Long-term Assessment

It will be important to track the success rate for this set of proposals, but other long-term outcomes are also relevant. UGA participants' submission rate over the next several years, as well as the time between first proposal submission and first grant award should be compared to outcomes of a group of similarly promising faculty who didn't participate in the UGA to determine the long-term effectiveness of the program.

## **Summary**

Data reviewed here support the conclusion that the UGA was a beneficial experience for the participants and a good investment for the University. Faculty reported learning important skills, appreciating the support of the university, and finding the UGA experience overall to be valuable. Short-term outcomes are strong and promising, with 80% of UGA participants completing a submission-ready proposal, and 20% formally submitting their proposals, with many submission windows pending.

## **Appendices, Part One**

Appendix 1A: UGA Participant Survey

Appendix 1B: Table of UGA Proposals Authors, Submission and Completion, Submission Dates

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<sup>1</sup> One submission was rejected due to a technical problem, and will be submitted during the next submission window for the funder.

Appendix 1A: UGA Participant Survey

June 20th 2016, 1:41 pm PDT

Please rate the following UGA elements with your assessment of their value:

Question	Of no value to me 1		2		3		Of great value to me 4		NA/Didn't use		Total
Fall information sessions	0.00%	0	23.81%	5	23.81%	5	47.62%	10	4.76%	1	21
Spring working sessions	4.35%	1	13.04%	3	26.09%	6	56.52%	13	0.00%	0	23
Assigned time of 0.2	0.00%	0	4.35%	1	0.00%	0	91.30%	21	4.35%	1	23
Assignments with sequenced deadlines	0.00%	0	4.35%	1	30.43%	7	65.22%	15	0.00%	0	23
Peer review	0.00%	0	22.73%	5	22.73%	5	50.00%	11	4.55%	1	22
Internal senior scholar review	0.00%	0	13.04%	3	26.09%	6	47.83%	11	13.04%	3	23
External expert scholar review	0.00%	0	0.00%	0	8.70%	2	73.91%	17	17.39%	4	23
Statistical consultation	4.55%	1	0.00%	0	4.55%	1	18.18%	4	72.73%	16	22
Editing service	8.70%	2	0.00%	0	8.70%	2	17.39%	4	65.22%	15	23
UGA Overall	0.00%	0	0.00%	0	13.04%	3	86.96%	20	0.00%	0	23

In order of average perceived value:

Assigned time of 0.2	3.91
External expert scholar review	3.89
Assignments with sequenced deadlines	3.61
Internal senior scholar review	3.40
Spring working sessions	3.35
Peer review	3.29
Statistical consultation	3.33
Fall information sessions	3.25
Editing service	3.00
<b>UGA Overall</b>	<b>3.87</b>

**Please rate your \*current\* ability to do the following:**

Question	Not at all capable 1		2		3		Completely capable 4		Total
Locate potential funders for a project	0.00%	0	0.00%	0	47.83%	11	52.17%	12	23
Complete a budget and budget justification	0.00%	0	8.70%	2	34.78%	8	56.52%	13	23
Draft a strong proposal narrative	0.00%	0	4.35%	1	39.13%	9	56.52%	13	23
Communicate with a funding program officer	4.35%	1	17.39%	4	47.83%	11	30.43%	7	23
Complete the submission/routing process	0.00%	0	17.39%	4	39.13%	9	43.48%	10	23

**Now think back to a time just before the UGA. Please rate your ability at \*that\* time to do each of the following:**

Question	Not at all capable 1		2		3		Completely capable 4		Total
Locate potential funders for a project	8.70%	2	47.83%	11	26.09%	6	17.39%	4	23
Complete a budget and budget justification	22.73%	5	40.91%	9	22.73%	5	13.64%	3	22
Draft a strong proposal narrative	4.35%	1	43.48%	10	34.78%	8	17.39%	4	23
Communicate with a funding program officer	34.78%	8	39.13%	9	13.04%	3	13.04%	3	23
Complete the submission/routing process	34.78%	8	30.43%	7	26.09%	6	8.70%	2	23

**How would you describe the UGA experience to a colleague?**

Most useful and comprehensive resource this campus has ever provided to help its faculty write successful proposals for external funding.

An amazing experience. I have learned a lot through this program. Enjoyed all workshops and services/resources received. At first, I thought that all of the assignments were a bit too much but without those structure (including assignments), I don't think that I was able to complete my grant proposal as planned. Really appreciate the UGA and the experience I have.

Fantastic! You may know the basics and the overall process, however, there are so many small, but very important, details here and there that you will learn in the academy. It is very well organized and well structured and the organizers are extremely helpful. It really pushed me to do what I wanted to do; to put together a complete draft of my proposal, something I might not have gotten the chance to accomplish with my regular load during the semester and might have postponed again and again. There is a certain level of accountability as well as flexibility that I found helpful.

The UGA is a tremendous opportunity to develop as a scholar with the support of the university. It is something that I felt was missing when I first arrived, and being surrounded by others interested in research was such a positive experience. I would recommend it without hesitation for those interested in research.

The UGA experience is a great opportunity to focus on grant writing, and get support for many elements of the process. I would highly recommend participating.

I received 0.2 release time by participating in UGA that I can focus on my draft proposal. It was really helpful to finish my proposal in two semesters. Without the UGA activity, I would never have a submission ready proposal now.

I would definitely recommend taking UGA. From UGA, I learned how the funding process is organized, how to contact the program officers, how to design budget plan, and how to organize the narratives. The homework assignments with deadline felt like a little push but I think some extent of compulsion is necessary; without deadlines, I think I couldn't finish writing the initial draft. After finishing one full initial proposal draft, now I feel more confident with the proposal writing.

UGA is a powerful experience in many ways. Two come to mind. First, it provides just the right amount of structure. Examples of "structure" are: a course release to allow time for proposal writing, manageable milestones throughout the semester, and like-minded colleagues to share ideas and lean on for support. At the same time, UGA requires no busywork, meetings are highly efficient, the UGA facilitators were understanding and friendly about the deadlines, and my like-minded colleagues are not working on the same topic (so there's no element of competition). I think the UGA strikes just the right balance between this structure/accountability and freedom/space to think. Second, UGA gave me access to the incredible community of research-active faculty and administrators across SJSU. Not only did I learn a lot from these individuals, but I also got a glimpse of their perspective (e.g., the Tower Foundation folks sharing their expertise about the interests of foundations). Together, there is no question that the UGA was worthwhile.

The UGA is a tremendous opportunity to learn all of the necessary steps to successfully submitting a grant proposal. You will have the support of people from the research foundation, colleagues who have received grant funding, and colleagues going through the grant submission process.

This is an absolutely necessary opportunity for young faculty.

A very worthwhile program to help understand the grant writing process.

It was very good, I especially liked the outside review process.

UGA provides structures and a support system to allow you to complete a grant proposal during the hectic semester.

Extremely supportive and highly informative in so many ways!

I don't think one needs to say anything to the younger colleagues. They realize that external funding is important for tenure. For those who have tenure, I'd point out that much of the support that we used to have (equipment, staff, student assistants) has vanished, and that it won't come back until you get the funds yourself. So, you have to learn how to get grant money if you want to do anything other than teach or administrate. You aren't going to figure it out by yourself--it's not always intuitive, and it is *\*very\** time consuming. So sign up for the UGA. They'll do a good job walking you through the process and making you write that first proposal. And you'll get the release time to do all that work.

Provides useful information and feedback on the grantwriting process, with some help writing a specific grant.

### **In the UGA, did you accomplish as much as you'd hoped or expected to?**

Answer	%	Count
Yes	72.73%	16
No	27.27%	6
Total	100%	22

## For those who answered “No”: What do you think is the reason you didn't accomplish as much as you hoped? What hindered your progress?

My main reason is largely external to the UGA program itself, in that I was asked to take on a large service responsibility representing the Chemistry Department in the planning process for a new Science Building (partly due to a family emergency experienced by the Department Chair). The time commitment was grossly underestimated by all, so I did not receive any release time for it which impacted my ability to use my UGA release time. I still benefitted greatly from the program, however, and will continue benefitting from it during the summer as I finish my proposal.

I think I suffered from the same things my students do, and could have used more structured work time and more scaffolding.

I wished I got a feedback on my proposal earlier in somehow so that I can focus my time on correcting in the right direction.

I was teaching 1 new class and 1 other class where I had implemented a teaching innovation that took up a great deal of time. I also started 3 studies; one of which is now in the data analysis stage.

I needed more rounds of review. I think someone who comes right out of grad school and has a research agenda can write a focused proposal more quickly than someone who has been teaching for a while and needs to "restart" their research.

## Q8 - What suggestions do you have for improving the UGA?

More frequent deadlines for smaller chunks of the proposal narrative since it usually requires the most effort.

More specific information about the documents related to the NIH application package . I am learning as I am preparing for it :-) Maybe this will be a workshop section that can be provided by the Foundation. Just a thought.

I have the following suggestions: - I learned a lot from the guests, but perhaps more so from discussions with my colleagues about the specific grants I was writing for. Having focus groups, NIH, NSF CAREER, ... and exchange of ideas, and collaborations, among participants in each group can be extremely helpful. - Have mandatory writing marathon sessions. - Less focus on basic rules and procedures and more focus on practical aspects and writing hints. I found the talks by the NSF program officers very helpful.

More scaffolding and mini-deadlines, less money on food (not that I mind, but it could save the university some money).

Shorter and smaller weekly tasks would make the overall progress better.

I would have loved to see the whole schedule with due dates outlined at the very beginning. There were times where it felt like some internal deadlines and assignments popped up without a lot of warning.

I understand UGA may not give the release time to UGA attendees in the next semester. Please, rethink about removing this benefit. We are predominantly teaching University. It will be very difficult to encourage faculty to submit proposals without the support.

I think there is room for small tweaks to the guest speaker agendas, even though they worked well. I would suggest reducing the number of guest speakers that present on any one day. They are experts, and we want to hear what they have to say, but if there are too many, someone inevitably runs a bit long and we lose time that we intended as collaborative work time. I think a little bit more collaborative work time during our scheduled meetings would be worthwhile. Second, it's unfortunate that some faculty didn't complete their proposals by the end, but I'm not sure what you would want to do about it; I appreciated that the deadlines were there, but I also appreciated the flexibility and understanding as things came up. This kept me motivated but not fearful, which helped me have a good attitude about writing. But, the faculty who didn't finish a proposal really should finish theirs when they can, if for nothing else than they should have enough integrity to follow through.

Make the working sessions optional. I didn't derive any benefit from sitting in a room with others who were also working (I prefer to write alone). However, I know others really liked these sessions so perhaps keeping them but making them optional for those who like that style of work would be of the most benefit to everyone. I found the workshops in the fall tremendously helpful but I felt a few in the Spring were geared for graduate students rather than people with a PhD (and presumably everyone in the room had a PhD). For example, the session on writing was too remedial. Moreover, assuming everyone has submitted a journal article in the past, then they should also all have experience dealing with how to incorporate reviewer feedback. It might have been better to make these sessions optional for those who felt like they needed additional help in those areas.

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I would have strongly preferred to get started writing the proposal in the fall.

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It might have been worthwhile to spend some time discussing the various pieces after we completed them. For example, we had a session on the budget before we needed to submit our first attempt, which was useful. But going through the process also raised many budget questions that might have been handy to discuss in our groups.

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More specific, earlier deadlines, beginning earlier in the semester. Participants should have their grants selected prior to starting the semester/UGA. It felt like I lost a lot of time at the beginning deciding on a funder.

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There can be different UGA track: (i) for those who did not submit any proposal before (ii) for those who did not write any proposal before (iii) for those who wants a update an existing proposal etc

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More frequent deadlines with smaller products requested. More time in work sessions devoted to actually working or one on one help with specific items. There was too much focus at the beginning on finding a funder and doing a budget. Must of the information was repeated from fall information sessions and most of us had those things under control. Much of the information from the Tower and Research Foundations could have been covered more efficiently as posted informational sheets. I was hoping to use the UGA time as more protected time for actually working on the proposal. Finally, I wish there was more accountability for completion. I understand people have competing deadlines, etc, but I only received one half finished proposal to review and only received 1 peer review (the other person offered to do it 2 weeks late, but at that point I wouldn't have had time to incorporate that feedback since my grant deadline was so soon). I think the peer evaluations would be more helpful at some of the earlier stages to see if a non-expert can see the importance of your project, etc.

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I think if it is done over 3 semesters, it may be more feasible to have a complete proposal that is ready to submit.

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fewer presentations and more writing sessions. It would have been helpful to devote more time to brainstorming, drafting, editing, perhaps in "writing groups."

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Start with the proposal narrative in the first semester and build in multiple sequential reviews (peer, expert, outside expert).

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Focus spring semester activities on defining a set of deliverables and deadlines for each specific grant. Then provide accountability mechanisms for progress toward each one of those objectives (a la NCFD bootcamp).

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## **Is there anything else you would like to say about the UGA and/or your experience with the UGA this year?**

I am extremely encouraged and pleased to see the University supporting faculty grant writing in this way. The paid external grant reviews and release time make a huge difference in the ability of faculty to write quality grant proposals. In particular, the paid external grant reviews could be offered by the Foundation outside of the UGA program for faculty who draft proposals well in advance of their submission deadlines. This would provide an incentive for faculty to draft proposals well ahead of deadlines (which would also be helpful to the Foundation).

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Thank you for all of your help and support!

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I just would like to thank Amy and John for their hard work and for giving me this opportunity. I am grateful to them and to the university for this wonderful resource.

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Thank you Amy and John. This has been fantastic and I appreciate all of your tremendously hard work!

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I personally thank Amy and John for their exceptional leadership from the start to the end of UGA. I was able to find resources, and people for the submission of my proposal. Also, budget session was really helpful for a junior faculty member.

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I think everyone involved in the development and execution of the UGA is to be commended for how well things ran (at least from my perspective). While there was an earlier pilot that probably helped, there was no guarantee how this would work with a large group of faculty across colleges. And, there are so many ways it could have been weird to be a student in a "course" run by other faculty, but it wasn't. It was supportive and collaborative. Very impactful. Thank you!

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Thank you to everyone who volunteered their time to make the UGA successful and to SJSU for committing resources to supporting faculty in this way. It greatly strengthened my commitment to the university. I wish all of my colleagues had an opportunity to participate in the program. The UGA was incredibly helpful and I will continue to apply what I learned to all future grant proposals.

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Expand the program. It's great.

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It was a great experience, and I'm very grateful for all of the help I received in this process.

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The spring sessions could be more collaborative and more useful. The same things were repeated by the same people often.

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Thank you for everything. I hope my proposal get funded eventually.

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The external review was the most valuable thing for me from UGA. I received excellent feedback and it also helped me pose specific questions to other people that I had read the grant. It would be great if this support was available for everyone submitting a grant (or at least everyone that meets certain criteria.) I also appreciated the funding for stats consulting as that helped get my project prioritized with my stats collaborator. Thank you for organizing this program and I really hope you can continue it in the future. I would recommend it to all junior faculty in my department.

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I would like to thank everyone for being so kind and caring. It was really a pleasure to be in the presence of such highly accomplished and highly intelligent colleagues who are willing to put in so much time and effort and offer assistance to facilitate the progress of their colleagues!

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Thank you for doing it!

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Great opportunity, support for writing a grant is key to getting it done.

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Appendix 1B: Table of Proposals Status and Submission Dates

Name	Title	Funder	Date	Aux
Katie Wilkenson SUBMITTED	Mechanism for impaired muscle proprioceptor activity during diet induced obesity	NIH-SC3	5/25/16	RF
Abe Wolcott SUBMITTED	Surface modification of fluorescent nanodiamond for biosensing	NIH SC3	5/25/16	RF
KaiKai Liu SUBMITTED	Creating a Spatial-Aware Connectivity Infrastructure for Smart City	NSF 16-549	6/7/16	RF
David Schuster SUBMITTED	Knowledge Elicitation for Cyber Security	American Psychological Foundation	6/15/2016	UA/Tower
Meekyung Han SUBMITTED	Breaking barriers to empowering family caregivers of persons with mental illness: Assessing the effectiveness of an online version of National Alliance on Mental Illness Family-to-Family psychoeducational program.	NIH R15	6/15/16	RF
Richard McNabb COMPLETED	Arguing the Humanities: A course for STEM students	NEH	6/23/16	RF
Dan Nathan-Roberts IN PROGRESS	SeeWork: Real-Time Quantification of Patient Work	PA-13-313	6/25/2016	RF
Liz Mullen COMPLETED	The Role of Incidental Harms in Moral Character Judgments	NSF	7/15/16	RF
Younghee Park COMPLETED	Security Analysis in Software Defined Networking	NSF	7/20/16	RF
Ben Hawkins IN PROGRESS (left university)	Development of novel, size-independent dielectrophoresis separations	NSF Career	7/21/16	RF

Appendix 1B: Table of Proposals Status and Submission Dates

Ozgur Keles IN PROGRESS	Strong and tough polymer composites through graphene quantum dot hierarchical reinforcement	NSF Career	7/21/16	RF
Ehsan Khatami COMPLETED	Numerical Linked-Cluster Expansion Toolbox for Correlated Quantum Materials	NSF 15-555	7/22/2016	RF
Nadia Sorkhabi IN PROGRESS	Cultural Variations in Parenting: Links to Parent-Adolescent Conflict, Adolescent Disclosure to Parents, and Adolescent Mental Health	Spencer Foundation	8/1/16	UA/Tower
Hyeran Jeon COMPLETED	Computer Architecture Foundations for GPU-accelerated High-Performance Self-driving Cars	NSF	8/10/2016	RF
Alexey Semenov COMPLETED	Perceptions vs. Actualities: Examining the Effects of Perception of Liability of Foreignness and Cultural Intelligence on the Multinational Enterprises' Mode of Entry	NSF	8/18/16	RF
Jordan Schettler COMPLETED	Summer Math REU at San José State University	NSF REU 13-542	8/24/2016	RF
Jennie Zhang COMPLETED	Developing Interventions for Health Enhancing Physical Activity	NIH R21	10/16/16	RF
Thom Austin COMPLETED	Securing Web Applications with Faceted Values	NSF 15-575	9/10/16	RF
Faustina M. DuCros COMPLETED	Louisiana Migrants in California Oral History Project - Career Enhancement Fellowship	Woodrow Wilson National Fellowship Foundation	10/28/2016	UA/Tower
Annalise Van Wyngarden IN PROGRESS	Reactions of Organics in Atmospheric Aerosols during Cloud Formation: Implications for Climate	NSF ECS RU	10/31/16	RF
Peggy Boylan COMPLETED	UNDERSTANDING OUR STUDENTS: Engineering Course Revamp: A Study of Growing Student Performance and Satisfaction through Human Connections in a Non-Residential	NSF	11/2/16	RF

Appendix 1B: Table of Proposals Status and Submission Dates

	University			
Allison Briceno COMPLETED	The Development of Emergent Reading in Spanish and English: An Exploratory Study	National Academy of Education/ Spencer Foundation Postdoctoral Fellowship	11/05/2016	UA/Tower
Birsen Sirkeci COMPLETED	User Cooperation For Cognitive Radios in Dense Networks	NSF	11/18/16	RF
Cay Horstmann COMPLETED	Interactive Problem Sets for Building Programming Competence in Introductory Computer Science Courses	NSF IUSE-EHR	1/11/17	RF
Youngsoo Kim COMPLETED	High Performance Computing for Military Application Acceleration	DARPA	4/5/17	RF

## PART TWO: PROCESS ANALYSIS

This portion of the report briefly describes the processes of the UGA, and analyzes based on facilitator experience and stakeholder feedback the strengths and weaknesses of the various components. Recommendations for changes are made; these are incorporated into the separate curriculum document. Program components considered include the administrative structure, marketing and application processes, fall information sessions, and the spring program consisting of assigned time and cohort groups, work sessions with sequenced assignments, proposal reviews, mentors, and supplementary supports.

### **Administrative structure**

The UGA administrative structure consisted of a Director working under the guidance of the CFD and the OR; an Advisory Board, a second facilitator, administrative support from the OR, and a student assistant. The UGA Director, Dr. Amy D'Andrade, was responsible for developing, implementing, and evaluating the UGA. Tasks included developing and facilitating the Advisory Board, creating the marketing plan and marketing materials, overseeing the application and review process, identifying mentors, developing and coordinating Fall and Spring sessions, working with the OR analyst to approve and process paperwork for all contracts (for mentors, food vendors, consultants, and external reviewers); drafting all related memos of invitation and thanks, communicating with the campus community, mentors, and staff presenters; communicating with UGA participants regarding program requirements and expectations; and facilitating one cohort (Cohort A). The second facilitator, Dr. John Lee, was selected to lead one cohort of UGA participants. He contributed to the development of content and outlines for Spring working sessions, developed and managed the Canvas platform, attended all meetings of Cohort A, contributed to the final assessment reports, and facilitated meetings of a second cohort (Cohort B). The purpose of the UGA Advisory Board -- consisting of representatives from all the colleges, both auxiliaries, the OR, and the CFD -- was to inform and guide the work of the UGA director. The Board met several times during the summer and fall semester, and also communicated via email. A subcommittee of the Advisory Board served as UGA application reviewers (See Appendix 2-A for a listing of Advisory Board members). Jeanine Jones, analyst in the Office of Research, provided administrative support for the hiring of mentors, contracts for external senior scholars and mentors, payments, and memos and invitations. The student assistant supported the Director with preparing draft memos and letters, and other miscellaneous tasks.

For the most part, this administrative structure worked well. The advisory board provided critical feedback and guidance in the early stages of the UGA development. Having two facilitators turned out to be very beneficial, as it increased creative ideas, drew from additional expertise, and allowed the logistical work involved to be shared by both facilitators. Student support was very helpful particularly with the development of memos and invitations. However, there was an excessive burden placed upon the analyst from the Office of Research. Because the university does not have a separate process for small, one-time payments to external contacts or campus faculty, contracts had to be put in place for each of the 25 external senior scholars, and faculty special consultant forms processed for most of the mentors. This resulted in a serious administrative burden on a staff person already shouldering full workload responsibilities for a major unit on campus.

#### *Recommended changes.*

- Identify less burdensome process for payment of external senior scholars.

### **Marketing and application processes**

To market the UGA opportunity to the campus community, two informational sessions were provided by the director, one in person (about 20 attendees) and one on-line via WebEx (about 15 attendees); the AVP for Faculty Development, Amy Strage, sent information and links to applications/announcement to all faculty via several email announcements; Advisory Board members were requested to mention the UGA opportunity in college/department meetings, and share with the chairs and directors and Dean of college; and the director created a website with details on the CFD website. To select appropriate participants from the applicant pool, a volunteer subcommittee of the Advisory Board was formed; each member of the review committee was assigned to review 10-15 applications; each application was reviewed by two Advisory Board members. The board members met, discussed each application, and selected the participants. Given the larger than expected applicant pool, the original plan to serve 12 faculty was revised to be able to accommodate more faculty members, and a qualified faculty member was identified and hired to facilitate a second cohort.

The marketing plan appeared to be successful as there were 35 applications for the UGA, with applications coming from all of the colleges. There were a few problems with the marketing implementation: A space for the Deans' signature was mistakenly left off the application materials, and revised materials had to be sent out; written marketing materials and the application documents did not clearly enough emphasize the developmental aspect of the UGA; and Advisory board members outside of Engineering and Science felt ill-equipped to assess the merits of the proposals included in applications by Engineering and Science faculty.

#### *Recommended Changes:*

- Clearly outline the developmental aims of the UGA in marketing and application materials.
- Have proposals from Science and Engineering reviewed by faculty/administrators with Science / Engineering backgrounds.

### **Fall Information Sessions**

Six information sessions were held on the topic of grant writing. These were open to the general campus community, and incorporated into the listing of "RSCA Events" held on campus by the OR, CFD, and/or the RF. The intent was to provide information needed for faculty to gain an understanding of how to move forward on the different steps of grant writing. Offering these sessions in the fall to all faculty was intended to allow a larger number of faculty to benefit from the Central RSCA funding. Access to most of these events was offered via WebEx as well as in-person. Content was coordinated by the UGA director and provided by the RF, Tower/Advancement, OR staff and/or other SJSU mentors. UGA participants were required to attend at least three of the fall grant writing sessions. UGA-developed information sessions were provided on: Moving from Idea to Proposal, Drafting a Budget, Local and State Governments as RSCA Funders, Foundations and Corporations as RSCA Funders, The Federal Government as RSCA Funder, and Understanding the Proposal Review Process (See Appendix 2-B for a listing of all RSCA Informational sessions offered in the Fall 2015; UGA-developed sessions are starred).

As noted in the evaluation report, attendance at UGA-developed sessions was quite strong and scores were high. The intent of the sessions, to provide information about critical steps in the grant writing process to the campus community and to prepare UGA participants for Spring working sessions, seems to have been met.

A number of challenges issues arose in the implementation of the sessions. For sessions simultaneously presented via WebEx, the facilitator's attention had to be split between the two audiences, and technical glitches hampered the quality of the WebEx experience. The 1-1.5 hour sessions were information-dense, relied heavily on RF/Tower staff as presenters, with little time for questions. Comments from the surveys suggested many participants wanted to have more time for workshop or questions and answers, to hear more from faculty with relevant experience, and to hear more about funders outside of the NIH.

*Recommended Changes:*

- Have two separate presentations for each content area, one in-person and one on-line. Tailor the content specifically for the platform. For instance, rather than an hour-long video for the on-line presentation, have several short videos and some handouts available.
- For in-person sessions, have sessions be two hours long; the first hour focus on information delivery and Q&A, and the second hour a workshop, in which faculty would apply the information learned. Those interested only in the information could leave after the first hour; those who stay would leave with a concrete product that moves their grant writing forward.
- Bring in more faculty as presenters, including faculty who have relevant experience with funders outside the NIH.

## **Spring Program**

### Assigned time and cohorts

Each participant received 20% assigned time to devote to the development of his or her proposal. No requirements other than attending four UGA work sessions were made for the use of this time. Two approximately equally sized cohorts were created to accommodate the larger than expected applicant pool; one cohort met on Tuesday afternoons and the other on Friday mornings. Because the majority of applicants and accepted participants were from the Colleges of Science and Engineering, one cohort consisted entirely of Science and Engineering faculty. The facilitator for this cohort was a faculty member from Engineering. The second cohort held the rest of the UGA applicants plus several more faculty from Science and Engineering. This cohort was facilitated by the UGA director, who is from CASA.

Assigned time appeared to be a critically important element of the UGA program. Eighty percent of UGA participants completed a submission ready proposal, a higher percentage than in the pilot CASA Grants Academy in which no assigned time was provided. Additionally, assigned time received the highest value score of all of the UGA elements in the assessment survey. However, even with the assigned time and the degree of structure provided by the UGA, 20% of UGA participants did not complete a submission ready proposal, and 25% reported they did not make as much progress as they hoped. For those participants, service and teaching obligations took more time than anticipated, and some felt more structure and writing time would have been helpful.

Having cohorts separated by college made some sense as funding targets tended to be more similar within cohorts and peer review was somewhat facilitated as well. It enabled the meeting size to be manageable and facilitated a meeting time that worked for all members. However, the relatively large size of cohort groups seemed to inhibit engaged conversation, questions, and frank discussion about challenges arising in the proposal writing process. In addition, within each cohort were faculty with more and less proposal writing experience; some faculty did not need and were frustrated by the somewhat basic level of the content provided, while others were challenged by it.

*Recommended changes:*

- Add additional weekly writing sessions. These would be optional but strongly recommended for all participants who have kept up with assignment deadlines, but required for any participants who have fallen behind with writing deadlines. For faculty who prefer to write/work in privacy or at their own desks, arrangements to check in virtually could be made.
- Provide a submission incentive to faculty who submit their UGA proposal within the next academic term.
- Have smaller cohorts, or subgroups within cohorts
- Organize cohorts or subgroups by funder target or proposal writing experience, or adjust assignments for individuals according to proposal writing experience.

Work sessions, assignments, and Canvas

Six two-hour work sessions were held with two cohorts of UGA participants during the Spring semester. Informational introductions by campus staff and experts from OR, RF, and Tower/Advancement were intended to take a small fraction of the time, with mentor contributions, participant Q&A, and workshop time intended to take the majority of the time in each session. Sessions included 1) an introduction reviewing the schedule, expectations, and the Canvas platform, content on 2) Drafting the budget, 3) Finding a funder, 4) Writing the narrative, and 5) Addressing feedback, with a final celebration session at the end. Sequenced assignments broke the full proposal process down into steps, with each assignment corresponding to an information session. Assignments included a 2 page proposal summary, identification of multiple funders, a budget and budget justification, registration/completed checklist from the relevant auxiliary program manager, and the proposal narrative in a final full submission. In addition, each participant was required to provide a peer review for two UGA colleagues. Canvas was used as the platform to communicate with participants as well as distribute materials and collect assignments. Discussions of topics and Q&A forums were also offered on Canvas.

As noted in the evaluation report, UGA participants appeared to greatly appreciate the information and structure provided by the work session format and sequenced assignments. Canvas worked well as a platform to distribute materials and collect assignments. Canvas did not work well as a platform for discussion or Q&A – participants simply did not use these options. Work session introductory content sometimes felt duplicative with the Fall information sessions, and took up too much of the time in the sessions. Many faculty reported wanting smaller, more frequent assignments to increase accountability and structure, and to reduce the burden of each assignment. Faculty wanted advance notice of all deadlines. Experience of faculty who completed the submission process suggested a need for greater preparation for this step in the process.

*Recommended Changes*

- Provide refresher information about grant writing steps on-line via brief videos and written materials to be reviewed prior to the session rather than as in-person presentations in the session so that sessions can be used for work time, answering questions, and individual consultations with campus experts and mentors.
- Break down assignments into smaller pieces (have components of the narrative be separate assignments, for instance).
- Provide schedule of assignments with deadlines in advance.

- Add session and assignments related to the final submission/routing process. Related assignments would include the biosketch, letters of support, and information related to facilities.

### Proposal reviews

UGA participants received critical reviews of their proposal from two UGA peers, from a senior faculty member or staff expert on campus, and from an external scholar with grant writing expertise in the relevant field of study. UGA leaders identified internal SJSU scholars/mentors to review drafts, and UGA participants were asked to identify an expert scholar in their fields with successful grant writing expertise to review drafts. These individuals were formally invited by the UGA director and the Associate Dean for Research of the University to provide reviews. Proposal drafts were sent out to all reviewers for a participant simultaneously, upon the submission of the first full draft of the proposal. Review templates were created that mimicked the forms used by the most common major funders targeted by UGA participants. Reviewers were given three weeks to complete reviews. A nominal compensation of \$500 was provided to external reviewers (See Appendix 2-A for listing of internal reviewers; see Appendix 2-C for listing of external reviewers).

Overall the review process enabled participants to receive helpful feedback on their proposals. In particular, feedback received from external scholars was rated as highly beneficial by UGA participants. Nonetheless, there were a number of challenges in the review implementation process. Regarding the UGA peer reviews, reviewing two full proposal drafts (10-20 pages) was burdensome for the UGA participants. Regarding the campus senior scholar reviews, there was a lack of campus mentors and scholars able to provide reviews, particularly for engineering and science faculty who needed reviewers with some understanding of their fields. Regarding the external expert reviews, these scholars were sometimes not well utilized, in that proposal drafts they received were not well enough developed to benefit from expert review. Some UGA participants had difficulty identifying appropriate reviewers in their field, and one external reviewer declined to participate after seeing the proposal topic, saying he lacked appropriate expertise in the area. A few challenges were relevant to all reviews: the formal templates turned out not to be a useful platform for the kind of feedback needed for early drafts; some reviewers preferred to write notes directly on proposal drafts and some preferred in-person meetings. And importantly, participants didn't receive feedback until a full draft was completed, at which point they may have spent considerable time and energy heading in a direction ultimately found to be unproductive.

### *Recommended Changes:*

- Solicit internal campus reviewers earlier in the program, based on subject matter as identified in participants' UGA application.
- Provide compensation for internal campus reviewers.
- Include content in a UGA work session on how to identify an appropriate external senior scholar.
- Identify external scholars earlier in the semester, and send them abstracts of proposals so they can determine whether they have the expertise to provide a useful review.
- Provide MS word versions of proposals along with review template and allow external expert scholars and campus senior scholars to provide feedback via whatever platform they prefer: phone or in-person consultation, written directly on proposal, and/or using a reviewer template.

- Have the three sets of reviews occur in a progressive sequence. UGA peers should review 2-3 page proposal summaries very early on; next, campus reviewers should review a longer but not yet complete draft of 5-10 pages, improved based upon the peer review; and lastly, external experts should review a full proposal draft, improved based upon the peer review and internal campus review.

### Mentors and Consultants

*Faculty mentors* representing all the colleges were identified. These were faculty members with strong grant writing experience who agreed to attend several UGA work sessions and/or review participant proposals and offer their guidance and suggestions. Mentors were paid a nominal fee or volunteered their time (See Appendix 2-A for a listing of mentors). *Editing and statistical consulting services* were provided to UGA members who requested them. Editing services were provided by an on-line, private academic editing service. UGA participants could request the service either before the proposal was sent to the external reviewer, or subsequently but prior to proposal submission. Statistical consulting services were provided by two SJSU faculty members with relevant statistical knowledge to support the UGA participants.

Mentors provided valuable content, connections, and feedback to participants. They made their successful grant applications or budgets available as examples, provided reviews of participants' proposals, and shared their experiences and tips in sessions or in written materials. Given the larger number of Science and Engineering faculty in the UGA, there was some difficulty matching disciplines and numbers of mentors between the two cohorts. Consultants were used by approximately 25% of UGA members. The score for the editing service on the UGA assessment was lower than for other UGA components. The editing service appeared to have less experience editing grant proposals compared to academic journal articles.

#### *Recommended changes:*

- Identify just a few mentors that can commit to attend most sessions of a cohort, rather than having mentors from every college.
- Identify and hire academic editors who focus on grant proposals, ideally with experience with particular funders targeted by UGA participants.

### **Appendices, Part Two**

Appendix 2A: UGA Supporters

Appendix 2B: RSCA Information Sessions Fall 2015

Appendix 2C: External Reviewers

## CONCLUSIONS AND RECOMMENDATION

Data reviewed here support the conclusion that the UGA program was effective in its intent, ably and fully implemented, and met a real need of faculty PIs writing one of their first external grants. In addition, the UGA was a investment in the future. Perhaps as important as the goal of supporting 25 faculty through the writing and submission of a current proposal, it connected those faculty to a network of resources – units, staff, administrators, and mentors – that will be helpful throughout their future grant writing careers. The evaluation has identified some places where the UGA could be improved. It is recommended that the UGA be continued for AY16-17, incorporating recommended changes noted here.

University Grants Academy Supporters – AY 16-17

**Mentors**

Marc D’Alarcao\*, College of Science  
Mark Felton, College of Education  
Camille Johnson\*, College of Business  
Persis Karim, College of Humanities and the Arts  
Lili Luo, College of Applied Sciences and Arts  
Margo McBane, College of Social Sciences  
Joe Pesek, College of Science  
Wendy Quach, College of Education  
Malu Riordan, College of Business  
Matthew Spangler, College of Social Sciences  
Miri VanHoven, College of Science

**Supporters**

*University Advancement/Tower Foundation*  
Paul McNamara\*, Foundation Relations Officer  
Michelle Smith, Corporate and Foundation Relations Officer  
Diane Satriano\*, Director, Corporate and Foundation Relations  
Eric Bonesteel, Corporate and Foundation Relations Officer

*The Office of Research*  
Gilles Muller\*, Associate Dean  
Pamela Stacks, AVP

*Center for Faculty Development*  
Amy Strage\*, Assistant Vice President

**Additional Reviewers**

Julio Soto, College of Science  
Essam Marouf\*, College of Engineering  
Melody Moh, College of Science  
Donald Hung, College of Engineering  
Jerry Gao, College of Engineering  
Xiao Su, College of Engineering

**Facilitators**

Amy D’Andrade\* (Cohort A)  
John Lee (Cohort B)

*The Research Foundation*  
Sandeep Muju\*, Executive Director  
Khoi Nguyen, Associate Director, Pre-Award Services  
Raj Prasad, Senior Director, Sponsored Programs  
Brenda Swann, Information Services Manager

*\*Advisory Board members:*  
Individuals noted above by \*  
Ruma Chopra, College of Social Science  
Fred Cohen, College of Humanities and the Arts  
Essam Marouf, College of Engineering  
David Whiteneck, College of Education

## RSCA Informational Sessions/Workshops/Panels/Events SJSU Fall 2015

Colleague Collaboration Connection Like speed dating, for researchers	Thurs 9/17/15 11:30-1:00	MLK 255/257	RF
The Responsible Conduct of Research All about ethics, IRB, & IACUC	Thurs 10/01/15 11:30-1:00	MLK 255/257	OR, RF
Moving from Idea to Proposal* Workshop on drafting a proposal summary	Fri 10/02/15 9:30-12:00	IRC 210	OR, UGA
Tips from Journal Editors and Librarians Lunch and Learn Panel	Mon or Tues 10/5 or 6/15 12:00-1:15	MLK 255/257	CFD
Introduction to the Research Foundation Focus on PreAward process	Thurs 10/15/15 11:30-1:15	MLK 255/257	RF
What you need to know about budgets* For preparing a RSCA grant proposal	Weds 10/21/15 3:00-4:00	IRC 210 and via WebEx	UGA, RF, CFR
Creation of surveys and survey items Workshop on how to create effective surveys	Fri 11/06/15 9:30-12:00	IRC 210	OR
Local and State Governments as RSCA Funders* How to find out about these opportunities	Mon 11/09/15 12:00-1:00	IRC 210 and via WebEx	UGA, RF
Writing Marathon Just writing for 3 days.	Thurs, Fri, Mon 11/12,13,16/15 9:00-3:00	MLK 255/257	CFD
Tour of Research Foundation, IES, Mineta An SJSU campus Point of Pride event	Fri 11/13/15 10:00-1:00	210 N. 4th Street	RF, CFD, OR
Foundations as RSCA Funders* Which have funded SJSU faculty RSCA?	Tues 11/17/15 12:00-1:00	IRC 210 and via WebEx	UGA, CFR
The federal government as RSCA Funder* What agencies have funded SJSU faculty? For what kinds of projects?	Weds 11/18/15 12:00-1:00	IRC 210 and via WebEx	UGA, RF
Taking the bite out of forms The proposal development process	Thurs 11/19/15 11:30-1:00	MLK 255/257	RF, OR
Understanding The Proposal Review Process* How to increase your chances of a favorable outcome.	Weds 12/9/15 2:00-3:00 PM	IRC 210 and via WebEx	UGA

## Appendix 2C: External reviewers

Name	External Reviewer
Thom Austin	Stephen Chong, Computer Science, Harvard University
Peggy Boylan	Dr. Richard Felder, Chemical Engineering, North Carolina State University
Allison Briceno	Robert T. Jiménez, Department of Teaching and Learning, Vanderbilt University
Faustina M. DuCros	Nikki Khanna, Department of Sociology, University of Vermont
Meekyung Han	Dolores Gallagher Thompson, Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine
Ben Hawkins	Adrienne Minerick, Chemical Engineering, Michigan Technological University
Cay Horstmann	Stephen Edwards, Department of Computer Science, Virginia Tech University
Hyeran Jeon	Murali Annavaram, Department of Electrical Engineering, University of Southern California
Ehsan Khatami	Dr. Mark Jarrell, Department of Physics and Astronomy, Louisiana State University
KaiKai Liu	Yuguang Michael Fang, Electrical and Computer Engineering, University of Florida
Richard McNabb	Jane E. Hindman, English, Guttman Community College
Liz Mullen	Linda Skitka, Department of Psychology, University of Illinois at Chicago
Dan Nathan-Roberts	Barrett S. Caldwell, Industrial Engineering, Purdue University
Younghee Park	Douglas Reeves, Computer Science, North Carolina State University
Jordan Schettler	William McCallum, Department of Mathematics, University of Arizona
David Schuster	Robert Hoffman, Senior Research Scientist, Institute for Human and Machine Cognition
Alexey Semenov	Jennifer Trueblood, Department of Psychology, Vanderbilt University
Birsen Sirkeci	Elza Erkip, Department of Electrical and Computer Engineering, NYU
Annalise Van Wyngarden	Barbara Ervens, Research Scientist, NOAA Earth System Research Laboratory
Katie Wilkenson	Francisco Alvarez, Physiology, Emory University School of Medicine
Abe Wolcott	Brian A. Korgel, Chemical Engineering, University of Texas at Austin
Jennie Zhang	Nia Aitaoto, Department of Internal Medicine, College of Medicine, University of Arkansas