

**CTL- Pedagogical Inquiry Grant Proposal**

Project Lead: Ginger Withers

**Project title: Planning for the STEM Hub**

Project Duration: Phase I, June 1 – Aug 31, 2019  
Phase II, Sept – Dec , 2019

**Participants for Phase I:**

|  |                              |
|--|------------------------------|
| Ginger Withers (coordinator)   |                              |
| Astronomy – Andrea Dobson  | BBMB - Jim Russo             |
| Biology - Michael Coronado   | Chemistry - Nate Boland      |
| Computer Science - Jon Stratton  | Geology – Kirsten Nicolaysen |
| Math–Albert Schueller (joined for the last 3 meetings once back from sabbatical) | Physics – Fred Moore         |

Although not a formal participant, Division Chair Kurt Hoffman also attended several of these meetings.

**Summary of Phase 1 Work—from rough draft vision and construction to launch**



The full committee met 5 times over the summer, 2-2.5 hours each time. At 3 of these meetings we consulted with Communications and Tech Services, ARC, and Diversity and Inclusion officers. In addition, everyone on the committee did significant work outside of our meetings. I (Ginger), or Jim and I, held additional planning meetings with representatives from different campus bodies (Communications, then the ACF (Admissions, Communications, Financial Aid), SEC, Prehealth

Advising, and Science Outreach Coordinator, the Dean of Students Office) to identify and arrange activities, and publicize events taking place in the Hub, set agendas for larger group meetings, and ways to publicize those events. Those meetings are ongoing as we plan events for the year, and work on a web page.

Our immediate task over the summer was to generate a list of programs/resources to have ready to go for Opening Week in order to launch the STEM Hub. In addition to generating that list, this team did substantial work to make opening week events happen. In our original proposal, we identified the following set of priorities. Below each is a brief description of work completed, ongoing or planned.

1) sign (announcements) board

Once the sign board was mounted, we worked with Tech Services, particularly Tristan Rupert and Austun Ables, to set up wireless system to send content to the board, and with Division staff to put together the content, and arrange a way to receive announcements from the division of events to post.

2) touch screen information, and other digital resources that will reside in the Hub

After the planning group identified key content for the touchscreen, a “technology subgroup” composed of Michael, Kirsten and Nate collaborated to build the content for the touchscreen information center which they were able to get up and running by opening week. Jim and I are continuing to work with Tech Services to get the presentation equipment in place.

3) information for new student advisors

In our larger group meeting with the ARC, we identified key information that would be useful to share with SAs. Andrea took the point on this work, putting together a powerpoint (and presenting during SA training) and handouts for them to use as they advise first years on STEM related issues.

4) agreement with ARC on coordinating tutoring in the Hub

The ARC is still operating with a parallel tutoring system that matches individual students to a tutor. But importantly, across the Division, we have begun coordinating/syncing tutoring. And the programs serving high numbers of first year students are now based in the Hub (e.g. Chemistry and Math). We believe this will substantially reduce the burden of seeking help and finding tutors who previously could have been located just about anywhere in the building, in Olin, or the library.

5) invitation to Admissions – use of Hub in visiting student tours

We have worked with Admissions to give talking points to tour guides, to encourage them to refer prospects interested in STEM to the Hub, and to make general information available through the Hub (by way of the touchscreen, and through copies of brochures and handouts available at the Welcome Table). We are also now scheduled to host events on visitors days, beginning 10/4.

6) major fairs– meet majors in depts

On the agenda to begin planning this fall.

7) student research/internship experiences

On the agenda to begin planning this fall, although the Science Open (9/2) showcased student work done over the summer.

**Detailed report on Phase 1 planning meetings and activities (the Launch)**

**1<sup>st</sup> STEM Hub Summer planning mtg 6/10/19; 1-3 pm**

CTL team present: Nate Boland, Michael Coronado, Andrea Dobson, Fred Moore, Kirsten Nicolaysen, Jim Russo, Jon Stratton, Ginger Withers

**Key discussion topics and action plan**

- Hub touch screen for students to access information, videos of students, and a digital sign board to advertise Hub events
- How departments can schedule tutoring hours in the Hub and potential role of new dept liaisons
- Potential strategies to target mentoring/advising to specifically enhance outreach to under-represented students – will schedule visit with Thomas Witherspoon, new VP for Diversity/Inclusion
- Identify priorities for academic support. Invite Janet Mallen to discuss SA training and ARC tutoring in a future meeting
- How to involve the Hub for Admissions tours and share information with prospective students
- Invite Savannah Tranchell, Dir. of Content, Communications to talk about web design of Hub info (Ginger and Jim followed up to meet with Savannah and Gillian Frew, who then redirected us to Gina Ohnstad and Josh Jensen.)
- How to assess contributions of the Hub—ways to gather participation data? Measuring tutoring outcomes?
- Need for a Stem Hub Users Guide for Div 3 faculty by mid-Aug – info faculty can include in their Fall syllabi, ideas/tips for how faculty can make use of the Hub.

**2<sup>nd</sup> STEM Hub Summer planning mtg 6/25/19; 1-4 pm**

CTL team present: Nate Boland, Michael Coronado, Kirsten Nicolaysen, Jim Russo, Jon Stratton, Ginger Withers.

Others attending: Kurt Hoffman, David Sprunger, Jon Loney, Austun Ables, Josh Jensen, Gina Ohnstad.

**Key discussion topics and action plan**

- Discussion with WCTS/IMS staff on installation, programming, and use of 75 in. sign board monitor and touch screen; What content will go here? How will it be updated on a regular basis? Focus group with students on what information is most useful.
- Hesitation from Communications about contributing web design for STEM Hub – topics to include on web site include advice for choosing majors, recommended curricula/course sequences and recommended timelines for premajors interested in STEM majors, research opportunities and activities  
planned follow up meetings with Ginger
- Michael, Nate, and Kirsten take lead for setting up prototype of touch screen and will seek student input at next Summer Science Café session
- Jim, Fred and Ginger take lead on putting together the Hub user's guide.

**3<sup>rd</sup> STEM Hub Summer planning mtg 7/17/19; 10 am-12:30 pm**

CTL team present: Nate Boland, Michael Coronado, Andrea Dobson, Fred Moore, Kirsten Nicolaysen, Jim Russo, Jon Stratton, Ginger Withers

Others attending: Kendra Golden, Janet Mallen

**Key discussion topics and action plan**

- Janet discussed the current organization of ARC peer tutoring as the ARC joins Academic Affairs and how we can move the Science related group and 1-on-1 tutoring into the STEM Hub, including whether to/how to track students in tutoring.
- Suggestion to change tutoring to mentoring and to increase training by both Janet and depts?
- Janet discussed the role of the Fall 1SAs (look for growth mindset, look at acad strengths, for Jewett, Anderson, Lyman, Prentiss – try to get all acad. areas covered in each hall. Interpersonal training to help students transition to academic rigors of college – time management, study skills, go to class, form study groups, awareness of resources. They work 8 hrs/wk
- Discussion about strategies for strengthening/normalizing collaborative studying and tutoring How to study in groups?; students interpretation of “office hours”; ideas about holding open office hours in Hub or residence hall—should disseminate these to division faculty
- Discussion of Opening week activities and idea to kickoff the acad yr. by holding an opening of Hub with summer research students presenting posters and dept liaisons answering question on the major
- Get any info for new student registration to Janet so this can go to SAs prior to Fri. meeting w/ advisors
- Since the academic mtgs on Fri. during new student advising has been eliminated – have fac. in STEM Hub on Friday morning (w/ tshirts)
- Science Open @ the Hub - Scheduled for Monday 9/2 2-4 pm in online program for opening week
- Assessment: Kendra suggests longitudinal data on persistence in STEM
- Michael unveils mock-up of touch screen display - main page w/ 4 buttons: stud research; resources; dept/programs; profiles. This will work!

#### **4th STEM Hub Summer planning mtg 7/31/19; 1-3:30 pm**

CTL team present: Nate Boland, Michael Coronado, Andrea Dobson, Fred Moore, Kirsten

Nicolaysen, Jim Russo, Albert Schueller, Jon Stratton, Ginger Withers

Others attending: Thomas Witherspoon, Jen Lopez

#### **Key discussion topics and action plan**

- Discussion on partnering to improve use of Hub resources, how the College can support Hub work and tools/tips from Thomas or WIDE that might be of use – discussed \$ to support peer mentoring
- Input from Thomas & Jen - get students to physically walk through the space and get tangible idea of what the space is and how it is used; getting intro classes to have walk through the space during the 1<sup>st</sup> week; have the Jun/Sen majors present to give the “Why’s” for their choice of the major; have o RAs/SAs visit the Hub during training; how to bolster fellows program - how many hrs/wk or hrs/sem??
- Michael -was part of pre-enrollment enrichment program as UG @ UC Riverside. what is the potential for a similar one? Tied to fly-in? Summer orientation?

- Thomas - June orientation – give suggestions for other things to do to prepare before starting  
How to close the gap? How to give feedback to all incoming students that can tell them what they can do to best prepare for 1<sup>st</sup> sem?
- Jen – 1<sup>st</sup> gen expertise; meet in Hub once/semester
- Discussion of student representation - use multiple people at different levels of expertise (SAs, fellows, majors so that there are always some students in the mix who have diverse representation)
- Ginger – strategies for how to choose students in broad/equitable way  
1<sup>st</sup> gen/working class/students of color/ students who have struggled – avoid the temptation to take the 4.0 student who hasn't struggled.
- Assessment: use of Presence to track students; Calendly?  
Challenges of multiple platforms used to track students, but not communicating across depts.
- Discuss essential need for a Hub director – joint faculty person (a la director of COWS) to do Hub and quant lit/intro math?
- Continue planning for Div 3 faculty welcome to the Hub on Thurs 8/29; Faculty in the Hub for advising Fri 8/30 9:30- 4; Science Open @ the Hub Mon 9/2.

### **5th STEM Hub Summer planning mtg 8/19/19; pm**

CTL team present: Nate Boland, Michael Coronado, Andrea Dobson, Fred Moore, Kirsten Nicolaysen, Albert Schueller, Jon Stratton, Ginger Withers

#### **Key discussion topics and action plan**

- Concrete planning for opening week, including review of the touchscreen content, and how to get it set up/coordinating with tech services
- Review/approve a draft ppt of slides to rotate through the announcement board, concrete plan for implementing, identify ways to improve—e.g. a progress bar at the bottom, preferred fonts/color schemes for best accessibility
- Routing communication re: events/content for announcement board, setting up a calendar for display
- Opening week event: Plan to have faculty available in the Hub on pre-registration/advising day—communicate to SAs and others so word gets out and students know to stop by
- Opening week event: open house/poster session, Monday, get light refreshments
- design/plan t-shirts for the open house/poster session (Division III purchased a limited number of t-shirts for student reps from departments/programs, and posters. The Hub committee also wanted t-shirts, and suggested that poster presenters should have t-shirts as well. Used leftover \$ from PIG budget to cover additional t-shirts.)

#### **STEM Hub Opening Week activities**

8/30, 8/31, 9-2, Friday, preregistration consultation with STEM faculty

We don't have a formal mechanism for keeping track of participation yet, but rough tally estimates at least 100 first year students stopped by for information.

9/2, Monday, Science Open—Showcase research of students who worked at Whitman, and off campus summer, plus faculty hosts to circulate, interact with guests and foster discussion.