

COLLEGE OF NATURAL SCIENCE and MATHEMATICS

Minutes of Council of Chairs Meeting – January 21, 2015

A meeting of the Council of Chairs of the College of Natural Sciences and Mathematics was held on Wednesday, January 21, 2015. Stephen Addison presided, members present: Ginny Adams, Jeff Allender, Pat Desrochers, Carl Frederickson, Ramesh Garimella, Uma Garimella, and Brent Hill. Guest: Rahul Mehta, Faculty Senator.

Agenda Items:

- Dean Addison led a discussion on Tenure and Promotion Guidelines for Honors College Faculty. Dr. Rahul Mehta who is on the Faculty Senate Subcommittee addressing this issue was present during the discussion to get feedback from our college for the committee.
- Minutes from November 10, 2014 meeting were approved with minor revisions.
- Dean Addison led a discussion on special requirements for the Bachelor of Science degree designation.
- Dean Addison asked all chairs to get their faculty equity and merit salary reviews turned in so the classification report can be generated. He also reminded chairs to do all of their staff evaluations as well.
- Dean Addison reminded all the chairs to make sure their faculty put things in Digital Measures so it makes it to the annual report. He advised chairs that subsequent reports are not pulled from the Chair's edited report but rather from data mined out of Digital Measures. The Dean also advised that it was very important to do faculty evaluations, have a meeting, and write a letter summarizing what was covered.
- Dean Addison announced that future Council of Chairs meetings would be held on the first and third Monday's of each month at 1:00pm in MCST 115.

Other Items:

- Dean Addison asked the chairs to have their position requests ready as the request from the Provost could come at any time and there will be a short turn around time to get our requests in.
- Dean Addison led a discussion on reassigned time including thesis support, mentoring, and capstone courses. He recommended that we create a committee to develop a college policy to address the issue on how to assign reassigned time while the work is being done and not afterward. He asked chairs to go back to their departments and evaluate what is being done and bring the information to the next Council of Chairs.
- Dr. Frederickson reminded everyone that nominations for the Noyce Internships and Scholarships are being accepted now. He will send out email reminders. He also mentioned that there is \$1500 of research funds available to the faculty researchers.
- Dean Addison announced that the Stoke Alliance Program has 4 scholarships available. He will get information out to everyone as it becomes available.

Chair Reports:

Biology

Dr. Hill reported:

- The 2015 Beltwide Cotton Conference was held in San Antonio, TX, January 5-7th. Harold Owiti, graduate student of Dr. John Choinski won 2nd place in the Agronomy & Physiology poster competition for MS students.
- Biology hired a new laboratory coordinator, Jennifer Harper.

Chemistry

Dr. Desrochers reported:

- Dr. Greg Naumiec (organic synthesis of medical imaging agents, NIH postdoc) had accepted our offer to join the department as a tenure track assistant professor in Fall 2015.
- Lori Isom submitted an INBRE proposal, "The synergistic role of hydrophobic and cationic side chains in DNA curvature" \$286,416 total request over two years
- Melissa Kelley submitted an INBRE proposal "A two way street: Retinoid regulation of immune cell adhesion and proliferation" \$308,930 total request over two years.
- Department is developing a screening exam for help advising students into CHEM 1402 or CHEM 1450 or into remedial CHEM 1301.
- STEM Posters at the Capitol is moving forward, Feb 11, 10a-noon:
 - 92 students from 15 schools presenting 64 posters
 - 7 UCA students and posters (at least 1 from all departments except Computer Science.)
 - 5 AP HS science classes confirmed attendance so far
 - Will Slaton from physics significant help with web site
 - Tom Goodwin from Hendrix luncheon keynote speaker

Computer Science

Dr. Ramesh Garimella reported:

- Drs. Tansel Halic and Sinan Kockara submitted a grant proposal to NIH INBRE titled, "VATDEP: Virtual Arthroscopic Tear Diagnosis and Evaluation Platform for Rotator Cuff Surgery" in collaboration with WAMS orthopedics surgery department. The grant aims at developing a virtual reality based simulation of the arthroscopic rotator cuff surgery, which is a minimally invasive surgical technique for the repair of shoulder ligament tears. The total amount requested for the project period is \$328,106.
- The Department is providing full or partial support to nine graduate students with funds from GA allocations, Department, and multiple grants including NIH contract, NSF REU and ASTA. The GA's responsibilities included teaching CSCI 1300; assisting in labs for CSCI 1470, 1480, 2440, and 3381; grading for various courses; and assisting in research.

Geography

Dr. Allender reported:

- An interesting partnership is developing between a couple of faculty and grad students in biology and the Geography Club. We have a drone with a camera, and they're looking into using it for a research project in the Jewel Moore Nature Reserve. We also have two MGIS students working with drone photography analysis for their thesis, and a couple of our faculty has taught remote sensing, satellite imagery, and aerial photography. This could be an area where geography would work with other departments for small scale mapping analysis of study areas.

- The director of one of the Arkansas Department of Education Curriculum committees called me last summer asking for help finding geography teachers to serve on the curriculum and frameworks committee. She indicated that they were noticing students at the middle and high school level were increasingly spatially illiterate, and it was impacting other courses. I did not remind her that I predicted that when they knocked all geography out of the K-12 curriculum almost a decade ago. I've been working with her over the past several months, and two weeks ago, the ADE revised framework was released and it will now require a semester of Geography in seventh grade, starting in the fall of 2015.

Several faculty from UCA, along with the Arkansas Geographic Alliance (housed within the UCA Department of Geography), have been working for years to get spatial analysis and geographic literacy into our middle school curriculum. What we find most rewarding and important is that it is not the memorizing places and names of generations past. The new curriculum will have students interpret and analyze the world in spatial terms, including understanding interactions between humans and the environment and seeing patterns in the demographic, cultural, economic, and resource use among people.

- The ADE website specifically listed our Alliance in stating,

"The Arkansas Geographic Alliance could be a valuable partner in developing this professional development for geography – both content and skill focusing on human geography and trends in instruction."
- Jeff Allender, the Coordinator for the Arkansas Geographic Alliance, along with Steve O'Connell, and other Alliance members, are already gearing up to run numerous workshops across the state to assist the hundreds of middle school teachers that will be teaching this course. They also plan to work with the middle school teachers that were on the curriculum frameworks committee in developing and implementing the curriculum and course content. Drs. O'Connell and Allender are already working with Esri (the largest GIS software company in the world) and Uma Garimella of the STEM Institute to develop and run StoryMap workshops around the state for middle school teachers. The hope is that this powerful technology can become an integral part of this new geography curriculum, connecting the social sciences with spatial technologies and analysis.

Mathematics

Dr. Ramesh Garimella reported:

- Dr. Danny Arrigo presented a paper – Symmetries and Compatibility of the Gross-Pitaevskii equation – at the Annual Joint Meeting of AMS/MAA held January 10-23 in San Antonio, TX. The paper was co-authored with undergraduate math research student, Kyle Barker. Mr. Barker presented a poster by the same name in the student poster session.
- Dr. Jason Martin and a colleague of his from the University of Northern Colorado have been invited to conduct a workshop for teachers at the upcoming OK-AR Sectional MAA meetings.
- The Math Resource Lab (MRL) is open Monday through Friday and weekends. It is also open Monday through Thursday, from 6pm-8pm, with faculty members (Spellman, Burg, and Garimella) offering tutoring for calculus students. During the Fall 2014 semester, there were over 600 students who sought calculus tutoring, and over 400 students who sought college algebra tutoring. In addition, there were nearly 1100 students seeking help for other math courses. The MRL, staffed by faculty and GTA's is free to all students seeking help with math courses.

STEM Institute

Dr. Uma Garimella reported:

- Belinda Robertson's position is advertised and applications are being accepted. Committee is made up of UCA math faculty, COE faculty, COOP representative, and ADE representative. We will start reviewing the applications on February 15th.
- Ms. Ready, our science specialist, is on family medical leave till end of February. HR will review and offer her options based on her health.
- Offering Engineering is Elementary and COD EK-5 workshops - more on engineering and computer science.
- Working with Geography department to offer more GPS workshops
- Research/publications/presentations:
 - "iPad for STEM Teachers: A Case Study on Perceived Usefulness, Perceived Proficiency, Intention to Adopt and Integration in K0-12 Instructions (Haihong Hu and Umadevi Garimella) Journal of Educational Technology Development and Exchange (JETDE) 2014 17(1), 49-66.
 - "STEM: Charting The weather" (with Dr. Carolyn Pinchback and Mr. Daniel Hope) 2014 Hawaii University International Conference proceedings 2014.
- Upcoming events
 - "In-service perception of Using Literacy Strategies in Mathematics" 2015, Umadevi Garimella, Carolyn Pinchback and Shoudong Feng, 42nd Annual Meeting of RCML in Las Vegas, NV. February.
 - "Beginner Robotics for STEM: Positive Effects on Middle School Teachers Beginner Robotics for STEM: Positive Effects on Middle School Teachers." 2015. Haihong Hu and Umadevi Garimella, Society for Information Technology and Teacher Education International Conference, Las Vega, NV, March
 - "Formative assessment using manipulatives." 2015. Umadevi Garimella, National Science Teachers Association, Chicago, March.

Physics

Dr. Frederickson reported:

- Dr. Andrew Mason attended the winter meeting of the AAPT in San Diego, CA on January 3-6. He presented a poster titled "Considerations for Multiple Science Majors: Attitudes and Cognition." In addition, he completed his term as the Area Chair of the Committee for Graduate Education.
- Dr. Debra Burris and three students, Catherine Mason, Kayla Waters, and Brittany Daranzo attended the Council on Undergraduate Women in Physics conference at the University of Mississippi on January 16-18.
- Dr. Azida Walker submitted a proposal for an Arkansas INBrE Research and Development Grant titled, "Understanding the Roles of the Shaker Kv1 Channels through the Variation in the Voltage Dependence Hysteresis."