

# COLLEGE OF NATURAL SCIENCE and MATHEMATICS

## Minutes of Council of Chairs Meeting – October 3, 2016

A meeting of the Council of Chairs of the College of Natural Sciences and Mathematics was held on Monday, October 3, 2016. Stephen Addison presided, members present: Ginny Adams, Jeff Allender, Emre Celebi, Pat Desrochers, Carl Frederickson, Ramesh Garimella, Uma Garimella, and Brent Hill. Guests: Aimee Poynter, Director of Development for the CNSM, Amy Hawkins, Jessica Underwood, Vicki Parish, and Mike Casey from the Center for Teaching Excellence.

### Agenda Items:

- Dean Addison introduced the new Director of Development for the CNSM, Aimee Poynter. Discussion followed on ways to raise funds and reach out to alumni and areas of focus from each of the departments.
- Amy Hawkins, Director of the Center for Teaching Excellence, introduced her staff and gave an overview of the programs and goals of the CTE. She asked that Chairs encourage their faculty to take advantage of the programs being offered by the CTE and to let them know that money is available for pedagogy and instructional content conferences as well as course development.
- Ginny Adams reminded Chairs that Digital Measures is based on a fiscal year (July-June), unlike the Faculty Annual Reports. She asked that Chairs continue to encourage faculty to update Digital Measures as events occur.
- Minutes from the August 29, 2016 Council of Chairs were approved with minor revisions.

### Other Items

- Dean Addison announced that he will be attending the UCA/Metova Cyber Range Meeting on Wednesday, October 5, 2016. The purpose of the meeting is to discuss establishing a CyberCENTS platform in Arkansas which would provide both K-12 and post-secondary educational opportunities.

### Chair Reports

#### Biology

Dr. Hill reported:

- David Dussourd and Kyle Hurley attended and presented at the International Congress of Entomology in Orlando, Florida. David won best photograph for a member of the Entomology Society.

#### Chemistry

Dr. Desrochers reported:

- Met with Dr. Ariel Marshall (UCA – BS 2008). Dr. Marshall is now a tech/science advisor for Senator Jeanne Shaheen of New Hampshire. Dr. Marshall would be an excellent speaker to

bring back to campus. Talks would include alternate careers as a scientist and energy/tech policies.

- Tori Dunlap and one of her students, Danica Ordonez, attended the Gibbs conference on thermodynamics and biochemistry in Carbondale, Illinois, on September 24-27, 2016.
- UCA Student American Chemical Society (ACS) Affiliate was recognized as an outstanding chapter by the national ACS – the only such award given in the state. This marks their fourth such designation over the past 5 years. The chapter also earned a green chemistry award from the ACS green institute. Karen Steelman, Faith Yarberry, Kristin Dooley, and Greg Naumiec are the advisors.
- Bill Taylor earned his third NSF-RUI award. The current award (\$223,913), “Investigating the Influence of Halogen Ligands on the Ability of Late Gas-Phase Transition Metal Ions to Activate Bonds in Small Substrate Molecules,” supports his work from 2016-2019.
- With NSF EPSCoR support, the department is purchasing a new high resolution IR spectrometer capable of reaching into the near IR region. This spectrometer is suitable for analyzing gas, liquid, and solid samples. The near-IR capability extends to 11,000 wavenumbers, a region now attracting much attention for use in bio-medical imaging, diagnostic and therapeutic materials.
- Tenure-track physical chemist search has 23 applicants.

#### Computer Science

Dr. Emre Celebi reported:

- The ads for the two tenure-track Computer Engineering positions are ready. With these positions, the number of dedicated Computer Engineering faculty will be three.
- The Computer Engineering program proposal has been submitted.

#### Geography

Dr. Allender reported:

- Matt Connolly had his invited submission for the SAS Encyclopedia of Archaeological Sciences accepted for their next printing. The article is entitled, “Statistics and GIS”. GIS and the use of LIDAR is a rapidly increasing tool for archaeological research and analysis.

#### Mathematics

Dr. Ramesh Garimella reported:

- Dr. Jason Martin, Assistant Professor of Mathematics and his collaborators at Ithaca College and James Madison are developing instructional videos in calculus using iPad Explain Everything white board app (provided with department funds), Geogebra (free), and Google Slides (free) or Keynote. The videos are Youtube videos with UCA logo appearing on each frame and will be hosted by Ohio State University’s ximera website, [www.ximera.osu.edu/course/mthomas7/jasonVid](http://www.ximera.osu.edu/course/mthomas7/jasonVid) to provide user data. Not all video links are fully functional as most of them are in the development stage.
- This fall there are 18 graduate students enrolled in our graduate programs, 13 of whom are GTAs. A week before fall classes began, the Department of Mathematics hosted a two-day orientation workshop for all GTAs, which included presentations by Dr. Charles Watson, Coordinator of GTAs, Pearson Publishing, and Education Seminars by Charlotte Strickland.

- The department has been approved to advertise for two positions in Applied Math and Math Education. The ads have been posted on the Applicant Tracking system and on Higher Ed Jobs. A joint ad will soon be posted in the Chronicle, EIMS, and other publication.
- The Third Annual Calculus Tournament will be held at 4:00pm on November 17, 2016 in the Math Resource Lab.

## Physics

Dr. Frederickson reported:

- No Report

## STEM Institute

Dr. Uma Garimella reported:

- Grants Funding at the STEM Institute:
  - STEM Institute in collaboration with College of Education, Mathematics, and Physics Departments submitted MSP EESS Year 2 renewal - \$133,688
  - Prepare four more grant proposals – one federal grant, NCLB, and three state grants STEM for Girls and Commitment to Excellence in STEM.
- Publications and presentations:
  - Co-authored a book chapter “ENGINEERING INSTRUCTION FOR HIGH-ABILITY LEARNERS IN K\_8 CLASSROOMS.” PRUFROCK PRESS INC. The Nation's Leading Resource for Gifted, Advanced, and Special Needs Learners, Austin, TX 78731
  - National NABT conference: presenting on November 4, 2016. Denver, CO
  - Regional Conference Mid-South Educational research Association MSERA – Mobile AL
  - State Conference Arkansas Curriculum Conference – 2 presentations
- Professional development for STEM Institute Staff:
  - VEX and LEGO robotics training: Both Ms. Cates and Ms. McKinney attended the training. This was for all STEM Center specialists.
  - Quantitative Biology: Dr. Garimella had a one-day training on increasing math integration into AP biology. St. Louis September 25.
- The Institute hosted two events for K-12 students:
  - Robotics Workshop (September 25, 2016)- Collaboration between Computer Science and STEM Institute. We had 25 students who attended the Saturday event
  - Science and Engineering Institute (September 10, 2016) a collaboration between ASMSA and STEM Institute. More than 40 students attended the institute and learned about electricity and magnetism.
- STEMteach students visited the resource room – Mr. Terry Johnson’s class. They are checking out materials. Plan is to move resources from COE to STEM Institute.