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# Concord University: Division of Sciences, Mathematics, and Health Newsletter

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## The New Kid on the Block – CU Health Department

There's a new and exciting department that has recently been incorporated into Concord's Division of the Science and Math departments – the Department of Health. The departmental offices and classrooms are located in the Carter Center, both top and bottom floors. The program has been rather busy since its recent development at Concord University.

The department offers a Bachelor of Science in Athletic Training, Sports Management, Health Education, and Physical Education majors. It also offers a minor in Health Promotions and Sports Medicine. There is a graduate degree offered that is completely online – a Masters of Arts in Health Promotions. The department staffs 13 faculty, including 4 tenured professors, 3 non-tenured professors, and 6 instructors. Research from these varying areas has been published in several journals and has been presented at 12 national seminars. The department has been awarded a quarter of a million dollars in external grants for previous and continuing research.

Also recently united with the Science and Math departments, the Athletic Training Education Program (ATEP) at Concord held the Annual Sports Medicine Conference of the West Virginia Athletic Trainer's Association (WVATA) on March 22-23, 2013. The sessions, which included concussion management, ethical issues regarding injured athlete play, trauma in cheerleading, foot and gait evaluation, sickle cell and exercise collapse, neck injuries, athletics and age, and emerging techniques in athletic training, were held in the Rahall Technology center. Students within the program also presented oral and poster presentations for the conference.

# Concord Mathematics Research



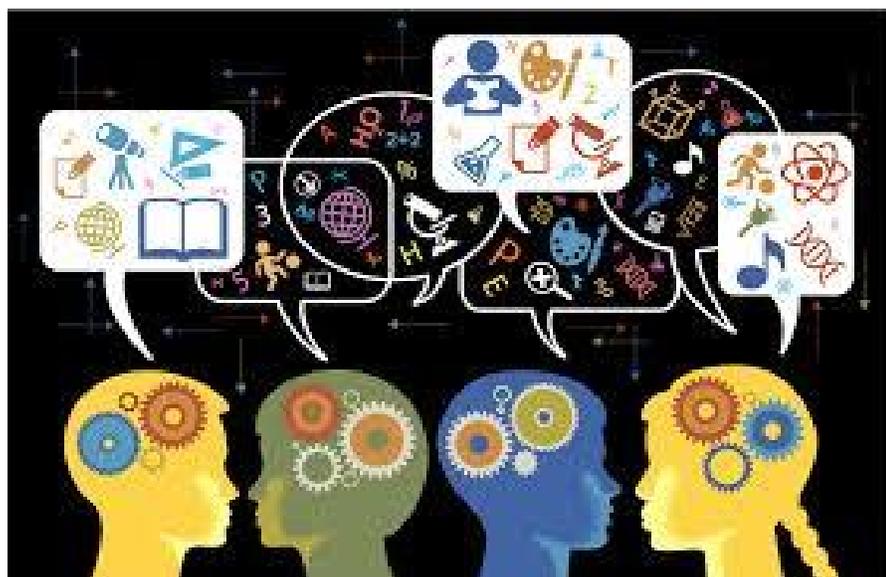
Dr. McClain is  
awarded CURM  
Grant

The CU Mathematics Department has recently received a grant, the Center for Undergrad Research in Mathematics (CURM) Grant from Brigham Young University in Provo, Utah. The CURM Grant is actually part of a National Science Foundation (NSF) Grant that is redistributed in smaller portions to small undergraduate universities all over the nation. The funding will be used next year to completely fund students' research and course release, meaning Concord University will not have to pay for the class or research materials needed for the project.

Each student involved in the research project this year will receive a \$3000 stipend (before taxes) from the grant, as well as all travel and lodging expenses covered for any seminars or presentation they will have to give on their research. The students will be required to present at Brigham Young University once their research is completed. Dr. William McClain, who actually applied for the CURM Grant, actually attended a workshop at the end of May 2013 with other representatives of the universities that also received the grant for this year.

He is planning on having his research student try a search; the upcoming CURM Grant seminar lent him a few ideas as to how to settle on a particular research project and also allowed him to hear about what other mathematics departments are studying across the country.

The students chosen for this research opportunity are preferred to be junior (or younger) math majors, but two are seniors. One recipient at Concord, Felicia Stover, participated in the George Washington University Summer Program for Women in Mathematics this past summer. Several alumni of the Concord Mathematics Department, Lisa Darlington (Professor) and Amanda Snedegar (2012 graduate) also participated in the same program when they attended Concord University as undergraduate students in the mathematics department.



## Science Outreach in the Community

Many members of the Concord University American Chemical Society (CU ACS) participated in outreach projects specifically geared toward opening young minds to scientific thought during the 2012-2013 and 2013-2014 academic years. The students visited Mercer Science Club and helped elementary students throughout Mercer County conduct hands-on chemistry experiments. CU ACS students, along with other science students also participated in the Division of Science, Mathematics and Health Open House, which was held with the Regional Math Field Day here at Concord. During this particular project, outreach volunteers led workshops, demos, and hands-on activities for Math Field Day participants and their families. The CU ACS club is also planning to host a Mad Scientist Lab at Princeton Public Library in an effort to bring chemistry exposure to the local community.

Within the CU physics Department, Dr. Timothy Corrigan has been featured in the newsletter "Nanooze", which was distributed to every middle school student in the state. The newsletter featured Concord's Physics Department's research on nanotechnology. The newsletter focuses on statewide nanotechnology programs that are available to undergraduate students, showing Concord University on the map as a place where 'nanotechnology is happening'. The CU physics Department is also beginning to develop an outreach program geared around its new Atomic Force Microscope.

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Several departments at Concord University have been coordinating outreach programs to get the local community involved in scientific experimentation.

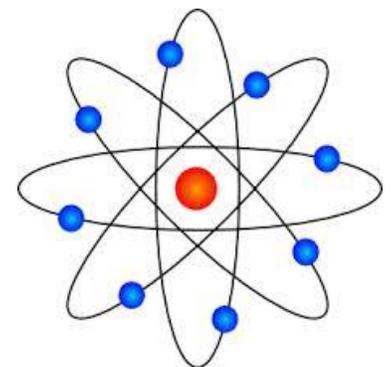
Many Concord University science students had the opportunity to judge elementary school science fairs at a number of local elementary schools.

The CU Biology Department has been working to organize several local science fairs at surrounding elementary schools in Mercer County. Dr. Dave Chambers offered his Anatomy & Physiology I & II students extra credit for helping with the science fairs; other science students were recruited for additional help as well. Dr. Chambers and Rebecca Creel (2013) went to the Athens Elementary School to give a small presentation on the scientific method and a mock experiment with soda and candy. The elementary students were given the opportunity to ask questions and were given information to take home to their parents so they could begin work on their science fair projects.

On March 20, 2013 volunteer students met at the Athens Elementary School gymnasium around 7:45 am for a brief run-through of the days' schedule and judging process. Every 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grad student was required to complete and show a science fair project. There were enough CU volunteers to have two groups of four judges for each grade, meaning each project would be judged by a total of eight judges. After the judging was all finalized, the top and bottom scores for each student or group of students was thrown out and the remaining six sheets were tallied for the overall score.

Awards were later presented at a school assembly for overall best in show, 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place in each grade, best in each classroom, and honorable mentions for all participants.

Volunteer students who could not participate in the Athens Elementary School Science Fair were sent to help out with one of the following science fairs: Strayer Elementary, Mercer County Elementary, and Melrose Elementary. Volunteering at these fairs still qualified the students for extra credit in Dr. Chambers' classes. In the future, the Biology Department is hoping to help organize a countywide science fair for Mercer County. The project is still in its younger stages, but the idea is developing. The county science fair will hopefully involve all elementary schools in the area and will take place at a larger venue, such as the Mercer Mall or Concord University's campus.



# Concord University

Presents:

## Pre-Professional Day

Concord University has been successful in placing many of its graduates in professional and health related graduate schools in both West Virginia and other states for many years. The science departments at Concord have always tried to bring in several professional schools for seminars on their programs each semester. This year, Dr. Dave Chambers, Dr. Kim Chambers, Dr. Tom Ford, and Biology Outreach Coordinator JP Meadows teamed up to begin Pre-Professional Day.

The goal of this event is to bring together professional and health related graduate schools from West Virginia and the surrounding states so Concord students can learn more about the different programs and what each school has to offer. Each school will have a table in which to provide information to the students. Undergraduate students will be able to talk with representatives from the programs and ask questions about admissions, what they look for in applicants, and any other questions they may have.

Several universities have reserved tables for the event in a wide variety of professional and graduate fields.

The schools that will be attending include:

- Appalachian College of Pharmacy
- Bluefield College Dental School
- Concord University Masters of Art in Health Promotion
- Marshall Biomedical Graduate Program
- Marshall Doctorate of Physical Therapy Program
- Marshall Medical School
- Marshall School of Pharmacy
- WV School of Osteopathic Medicine
- University of Charleston School of Pharmacy
- Virginia College of Osteopathic Medicine
- WVU Biomedical Sciences Graduate Program
- WVU School of Dentistry
- WVU School of Medicine
- WVU Division of Occupational Therapy
- WVU School of Pharmacy
- WVU Division of Physical Therapy.

Pre-Professional Day will be held on November 21<sup>st</sup>, 2013 from 11-4. The research poster session will be held from 12-3.

University Point will be the venue of Concord University's First Annual Pre-Professional Day.

Drs. Chambers, Chambers, Ford and Ms. Meadows hope that many more schools will reserve a table for the event.

Pre-Professional Day will also be an opportunity for students doing research to present their projects. There will be a mix of class research as well as independent research being presented in the fields of ecology, cell and molecular biology, biochemistry, physiology, analytical chemistry, and more. The professional and graduate school representatives have been invited to listen to the presentations and see what active research students are doing here at Concord.

Ms. Meadows said, "I believe this is an amazing opportunity for our students to become familiar with the different professions and programs available after graduation. This is a wonderful event and I hope to see it grow in the future."



# Concord Current Student News:

## Research, Summer Programs, and more!

### Active Research:

Dustin Spivey: Conducting coal mining and microbial communities of streams research with Dr. Tom Ford and McNair.

Katie Keaton-Hanna: Designing a cellulosome for biochemical energy with Dr. Dave Chambers.

Rachel Carey: Cloning of *C. elegans* ERM proteins with Dr. Dave Chambers.

JP Meadows: Researching the correlation between music tempo and heart rate / walking speed with Dr. Tom Ford and Dr. Dave Chambers.

Anthony Ormandy & Ngoc Vu: Preparing surface structures with fluorescent organic semiconductor molecules with Dr. Dana Alloway

Nguyet Le: working on enhancing fluorescence from quantum dots using gold nanoparticles.

Ina Nikolli: Will continue Nguyet's work. Her Focus will be using DNA Origami structures to precisely engineer the position of the quantum dots and gold nanoparticles.

Michael Bailey: Doing research using the atomic force microscope. A focus of his work is how Concord can provide science outreach programs to local middle and high school students and teachers.

Sean Gillian, Albert Barbery, Christina Facemeyer, Ryan Baisden, and Luke Stevens: Worked with Joe Allen and Steve Kuehn studying earthquake-related frictional melts and associated igneous and metamorphic rocks in Colorado and Greenland.

Joey Pritt, Teye Kalteyer, Travis Vaughn, Albert Barbery, Ryan Baisden, and Savannah Ballengee: Contributed to several ongoing research projects with Steve Kuehn that use volcanic ash as a correlation and dating tool for modern and ancient lakes in Washington, Oregon, and Alaska.

Gage Chandler, Donnie Kirk, and Al McCreary: Studied an unusual conglomerate exposed downstream of Brush Creek falls with Dave Matchen.

### Summer Programs:

JP Meadows: WV-HCOP and Marshall University Pre-Medical Summer Academy.

Jessica Allen: WV-INBRE Summer Research Program



### Upcoming Events:

Pre-Professional Day – November 21<sup>st</sup>, 2013

WVU Biomedical Sciences Graduate School Seminar – February 6<sup>th</sup>, 2014

James Madison University PA Program Seminar – February 13<sup>th</sup>, 2014

Marshall Health Informatics Graduate Program Seminar – February 20<sup>th</sup>, 2014

CU Students for HCOP and Marshall Pre-Medical Academy Seminar – March 6<sup>th</sup>, 2014



Concord Alumni News:  
Where are they now?

WVSOM: Isaac Mills, Mark Yost, Derek Trull, Katei Buckner, Brent Brash, Katrina Ostermann, Kayla Leach, Cassie McCoy, Jon Rogers

Marshall University Medical School: Carly Stout, Afton Wichline, Brandon Shiflett, Rebecca Creel, Adam Davis

Marshall University Biomedical Sciences Masters Program: Katrina Ostermann

WVU Medical School: Kelly Boone, Levi Stevens, Jodi Cook, Emily Fridenmaker, Dustin Syvertson, Christopher Bellew, Kristen Adkins, Urooj Rana

WVU Dental School: Daniel Moye, Ethan Lafferty, Angela Carbaugh

WVU Physical Therapy: Kelsey Mills

Marshall Physical Therapy: Tara Shleser

UGA Graduate School: Melanie Taylor

Marietta College PA Program: Taylor King

CU MAT – Lynsi Boyd

William & Mary Graduate School: Melissa Proffitt

Marshall Pharmacy School: Randy Johnson, Mollie Roush, Amber Crum

Alumni ... we would like to hear from you!

Tom Ford, Chair, Biology Dept.  
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PO Box 1000  
Athens, WV 24712-1000

Recent Professional and Graduate School Graduates:

Samantha Creel

