The big news for the year is that our proposal for a nursing program at JBU was approved in mid-September by the Arkansas State Board of Nursing. What you may not know, however, is that this major will be housed in a new administrative unit called the College of Education and Human Services (CEHS) rather than in the Division of Natural and Health Sciences. Other undergraduate majors that will be part of this reorganization include Education, Family and Human Services, Kinesiology, and Psychology. The new College will likewise include the graduate program in Counseling and the graduate and degree completion programs in Education.

While we are sad to lose the Nursing and Kinesiology Departments from our Division, we wish them well in their new “home”. I had the privilege to assist in the selection of Dr. Ellen Odell as Director of Nursing, and Dr. Jeff Terrell as CEHS Dean — two really fine people that I am confident will make great contributions to JBU.

In other news, I am excited to report that we have nearly completed a $150K renovation of the basement of Bell Science Hall. The centerpiece of this renovation is the creation of a new classroom (slightly smaller than BSH 217) that is equipped with state-of-the-art presentation technology, including a smartboard, and movable desks (node chairs) to better accommodate our students.
Undergraduate Research Makes a Difference

The NHS Division places high value on quality undergraduate research at JBU. Research is continually being directed by division professors on a wide variety of topics. Working alongside professors in relevant scientific research, students apply their knowledge at a higher level. Of the twelve students involved in research in the fall, four students were interviewed for their perspective on research.

Zach Houston, a senior biology major, enjoyed researching stream ecology, studying the health of Sager Creek, under the guidance of Dr. Tim Wakefield. As a naturalist and Christian, studying the macro to the micro has brought forth both the complexity and the beauty of God. The greatest challenge was in learning to manage his time wisely to allow the time necessary for work in this outdoor lab setting. The joy of research was in those unique moments when the team discovered a rare organism. According to Zach, undergraduate research allowed him to apply classroom knowledge and lab experiences accumulated during his time at JBU. Starting with something new in the field, then applying previous knowledge which then results in a completely different understanding was very motivating to him.

Ashley Lick, a vibrant junior biochemistry major, worked in her third semester of research. The collaborative work of Dr. Joel Funk with Dr. Francis Umesiri was the catalyst which sparked her interest in organic chemistry. Working with Dr. Umesiri, Ashley has been inspired as they tried to solve the dilemma of finding an antibiotic for tuberculosis. According to Ashley, research differs from the classroom lab in that the techniques are more exacting; the work requires a level of independence and the application of understanding is at a more focused level. Ashley loved the problem-solving aspect of research. The greatest challenge with research was the large quantity of time required to do it properly. Opportunities such as traveling to conferences allowed her to make some valuable connections with other scientists. Her passions for exploring the mysteries of organic chemistry became more clearly defined and expressed through her undergraduate research experience.

As a senior biology major, Kyle Crosser benefited from his undergraduate research experience with Dr. Funk, studying the intracellular bacteria Coxiella burnetii, which causes the disease, Q fever, and how it uses protein kinase C to its advantage. The results will be used to find potential drugs that could help in therapies for treating Q fever and the symptoms that it causes. The experience of collaborating with Dr. Daniel Voth, Dr. Funk’s mentor from the UAMS, was instrumental in giving Kyle a fuller understanding of research. Kyle was excited to be part of the groundwork involved in the discovery of new drugs because he sees research as the unsung hero of healthcare and medicine. The challenge with research is the delayed gratification of work, sometimes not seeing results for long periods of time. Undergraduate research aided Kyle in the application, with greater focus, of the knowledge that he received in the classroom and laboratory. The undergraduate research experience at JBU - with its concentration on learning rather than just experimental outcomes helped Kyle develop as a research student.

Sophomore Biochemistry major, Sara Whitlock, was one of four young researchers working with Dr. Brian Greuel analyzing and correcting genomic DNA sequences in several species of Dro sophila (fruit flies). Sara experienced a broader view of research as Dr. Greuel’s research team worked in partnership with researchers from Washington University. The challenge of figuring out the elements of a research project motivated Sara’s interest in science. Through this research experience, Sara found a particular interest in genetics. Running into roadblocks while performing experiments was particularly frustrating to Sara, yet it also motivated her to persevere. The time required for laboratory work brought challenges of its own for this college student. The continuity of working on one subject in depth rather than studying a variety of subjects at a surface level was the key difference between research and classroom/lab experience. The whole process of discovery through experimentation enlightened Sara to the joys of research.

While many universities have made research their primary objective, JBU’s Division of Natural & Health Sciences has made the education of students their primary objective. The division’s goal of working with individual students to help them discover their interests and fascinations with the world and science is clearly being fulfilled in Bell Science Hall as these students have testified.
Division Hosts Alumni Brunch During Homecoming

For perhaps the first time ever, the Division of Natural & Health Sciences hosted an Alumni Brunch during the 2013 JBU Homecoming. The event was held on Saturday, October 5th from 9:00 a.m. to 11:00 a.m. in the second floor lobby of Bell Science Hall.

Earlier in the year, “Save-the-Date notices” and invitations were sent to alumni, faculty and retired faculty of the division, including the old Division of Health & Sport. Reminder letters and phone calls to local alumni were all part of getting the word out.

This event, catered by Edibles by Zoe, featured delicious breakfast foods and hot coffee on the rainy fall day. A four-part display featuring pictures from the division’s past was available for reminiscing. With acoustic guitars playing in the background, forty-seven people were able to visit with fellow members of the division, past and present.

The NHS Division hopes to partner with the Alumni Office to host this event again in a few years, so stay tuned for more details!

New Furnishings and Spaces in Bell Science Hall

In the fall of 2013, students returning to Bell Science Hall for a new school year were greeted by new features in the building. With the creative input of committee members, Mrs. Jane Beers, Dr. Carla Swearingen and Mrs. Cathy Flack, the upstairs area of Bell Science Hall underwent a much needed change in décor.

First, the 10 year old carpet and well-worn furnishings in the upstairs lobby were replaced with a new carpet and updated furniture. Next, what was once a closet area on the second floor was transformed into a Student Computer Room with two new computers, wireless printer, study table with chairs and two lounge chairs. The alcove area on the same floor was also changed to include a large white board, a table with eight chairs, a microwave oven and a refrigerator. This space is an ideal Student Study Area.

The pictures of retired faculty near the parking lot entrance have been moved to a more centrally located wall in the building that is inscribed with the words, “As we honor the past, we celebrate the future.” Canvases featuring pictures of students and a wall vinyl highlighting each department now adorn the walls of the entryway.

Several students have indicated their approval of these changes. The greatest reward has been to see these new areas utilized by students. Students are finding that Bell can be a great place to study, as well as socialize.
Two Students Win Poster Awards at Scientific Conferences

A key part of scientific research is the creation and presentation of scientific posters. These large-format posters allow students to communicate their research findings at conferences, in class and in a variety of other educational and scientific venues. They are a clear, concise way to give an overview of the questions being asked, research methodologies, results, conclusions, and significance of the work. This year, two students from the Division of Natural and Health Sciences were recognized for their poster presentations at regional scientific conferences.

Kyle Crosser, a 2014 graduate of Biology, received an honorable mention for his poster at the 2013 Arkansas INBRE Research Conference. This event was held on November 7-8 at the University of Arkansas in Fayetteville. Kyle’s research, under the mentorship of Dr. Joel Funk (Biology), involved a study of the activities of several isoforms of protein kinase C during infection of cultured cells by Coxella burnetii, the bacterial species that causes Q fever.

Senior Biology major, Austin McCullough, a research student of Dr. Brian Greuel, won 3rd place in the Computational Application area at the 2014 conference of the MidSouth Computational Biology and Bioinformatics Society (MCBIOS) in Stillwater, Oklahoma held on March 6-8. The award-winning presentation reported the results of using DNA sequence data to map the structure and location of genes on a segment of chromosome #4 in the fruit fly species, Drosophila biarmipes. Dr. Greuel noted that this award was an amazing achievement considering that Austin was competing against graduate students, postdoctoral fellows, and professional scientists at this conference.

A number of division students also gave oral or poster presentations of their research at the Celebration of Academic Excellence held at the Walker Student Center on April 25th.

Photo Album #1 : Fall Favorite - The Annual Chili Supper

Everyone liked eating delicious chili at the Newton's. Students appreciated the unique table seating. The Chemistry demonstrations were a big hit!

Photo Album #2: Spring Favorite - End-of-the-Year Picnic

The rain held out as students and faculty prepare to feast on hamburgers, hot dogs, and more. Math majors, Josh Manning & Cameron Mc伦don, share memories of their four years at JBU. Several 2014 graduating seniors pose for a picture with NHS Division faculty.
Discovery Days in Bell Science Hall

Bell Science Hall welcomed 300 fourth graders from Southside Elementary School on April 22nd and 24th for the first-ever Discovery Day at JBU. The purpose of this field trip was to encourage elementary students to see science in a new way.

The budding young scientists, in groups of 20, alternately spent 15 minutes in the General Chemistry Lab and then 15 minutes in the General Biology Lab. Under the supervision of Dr. Carla Swearingen (Chemistry), they watched several demonstrations, such as “Elephant Toothpaste” and “Fire Bubbles”, that were given by JBU Chemistry students.

Biology students, under the direction of Dr. Tim Wakefield (Biology), assisted the fourth graders as they looked at tiny “critters” in Sager Creek water samples with dissecting microscopes. Dr. Joel Funk (Biology), then gave the elementary students a tour of the greenhouse.

The Discovery Days event was the brainchild of Mrs. Rebecca Evans, a fourth grade teacher at Southside Elementary School. In a collaborative effort with John Brown University’s Departments of Education, Engineering, Biology and Chemistry, the university welcomed these students to new experiences in learning. Mrs. Evans commented, “It went above and beyond what I imagined it to be. The students loved it!”

Parents, teachers and students had many positive comments about their adventures at JBU. One mom, who came as a field trip sponsor, said, “Best field trip EVER!” She said the kids had fun, they were totally engaged and you could tell they were learning. When boarding the school bus to leave, one student told Dr. Margo Turner (Education), “Remember my name—Jessica. I will be here in about 10 years and I will be a scientist.”

According to teacher, Ms. Becky DeFreece, this will be a day that the fourth grade students will long remember. Supporting our community schools by joining with them to instill a passion for the sciences and learning is an important role of the NHS Division.

NHS Update

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facilitate group work and active learning strategies. Node chairs are also replacing the more stationary desks that have been in BSH 217 since the completion of Bell Science Hall in 2003. These new changes add to the “facelift” of our building that is described in the article on page 3 of this newsletter. We’ll be sure to include pictures of these classrooms in the next edition of this newsletter.

Adding to the building changes for the coming year are new faculty members in the Math and Physics Departments. Mrs. Melissa Michael will focus on teaching math education courses and lower-level math courses for non-majors. Dr. Kenneth Hahn is replacing Dr. Daniel Main who took a job in industry. He will teach the calculus and algebra/trig-based physics courses that serve the NHS and Engineering Divisions. Profiles on both of these faculty members will be in the next newsletter.

We look ahead with optimism at the new directions that God will take our Division in the coming years. Effective in July, our Division will go back to its original name, the Division of Natural Science, which means that the next edition of this newsletter will have a slightly revised name. As always, we love hearing from our alumni and would covet your prayers as we continue to serve our Lord and students this summer and during the coming year.

Prayer Points

Pray for Dr. Don Siemens as he continues to pursue treatment for multiple myeloma. He underwent a stem cell transplant in January.
Pray for Mrs. Melissa Michael as she assumes the faculty position in Math Education.
Pray for Dr. Kenneth Hahn as he assumes the faculty position in Physics.
Pray for Mrs. Jane Beers as she returns from her spring sabbatical.
Pray for Dr. Ellen Odell, the new Director of Nursing.
Pray for the nursing program as it launches in the fall of 2014.
Pray that we will continue to serve God and attract excellent students to our Division.