WELCOME

New Online Masters Students for Spring 2016:
Heidi Allen, AZ; Mallory Amis, IL; Eleonora Arutyunova, MI; Catherine Bellmore, TX; Kristoff Berzins, NE; Jennifer Cain, PA; Melissa Davis, GA; Brittany De Ruyter, IA; Melanie Ferrell, AZ; Jason Genise-Gdula, PA; Alejandra Gil, TX; Nicole Gill, IL; Ian Glisson, GA; Joseph Hahn, MI; Marnell Holm, NE; Donald Jacobs, OH; Valerie Kershner, NE; Laurie Lawson, VA; Gregory McKinley, GA; Erin Moloney, FL; Sherri Nelson, IN; Shelby Olson, FL; Jerry Page, TN; Jessica Pagett, IA; Stephen Paris, VA; Ricardo Pontifis, TX; Christine Ritta, NE; Agata Rivera, NJ; Enecia Rivera, PA; Heather Schmuki, FL; Yasmeen Shehaiber, IL; Jasmine Stevenson, GA; Amanda Stricof, AZ; Jacob Syracuse, NY; Tito Tatis Talero, NV; Kerri Turner, MI; Susan Whittemore, NC

New Online Faculty for Spring 2016:
Dr. Brandon Luedtke joined the UNK Biology Department in the fall of 2015. Prior to arriving at UNK, he was a Postdoctoral Research Associate for the United States Department of Agriculture near Clay Center, NE. During his time with the USDA, he conducted research investigating methods to detect and enumerate Shiga-toxin producing E. coli from various sources. Dr. Luedtke completed his Ph.D. in Microbiology and Molecular Genetics from Oklahoma State University. While in graduate school, he conducted research on a secretion system associated with the human pathogenesis of the bacterium Coxiella burnetii. His current research interests stem from his postdoctoral and graduate topics with plans to further develop assays for different applications and address remaining questions with the secretion system. He is teaching BIOL 830P-04 – Neglected Tropical Disease online this spring.
NEWSFEED

A Biology Professor's research was highlighted by the University of Nebraska Kearney news this fall. Below is an excerpt from the article on Dr. Bryan Drew, Assistant Professor in the Department of Biology, entitled “UNK professor Bryan Drew participates in ‘Tree of Life’ research”. For the full article click on the link: unknews.unk.edu/2015/09/22/unk-professor-bryan-drew-participates-in-tree-of-life-research/

UNK professor Bryan Drew participates in ‘Tree of Life’ research

Published in Proceedings of the National Academy of Sciences

DURHAM, N.C. – A first draft of the “tree of life” for the roughly 2.3 million named species of animals, plants, fungi and microbes – from platypuses to puffballs – has been published in the Proceedings of the National Academy of Sciences.

The research is a collaborative effort among 11 institutions including the University of Florida, where UNK biology professor Bryan Drew worked as a postdoctoral researcher under the guidance of Douglas Soltis. The tree depicts the relationships among living things as they diverged from one another over time, tracing back to the beginning of life on Earth more than 3.5 billion years ago.

Tens of thousands of smaller trees have been published over the years for select branches of the tree of life – some containing upwards of 100,000 species – but this is the first time those results have been combined into a single tree that encompasses all of life. The end result is a digital resource that is available free online for anyone to use or edit, much like a “Wikipedia” for evolutionary trees, according to a Duke University news release published Sept. 21.
“This is the first real attempt to connect the dots and put it all together,” said principal investigator Karen Cranston of Duke University. “Think of it as Version 1.0.”

The current version of the tree – along with the underlying data and source code – is available to browse and download at https://tree.opentreeoflife.org. It is also described in an article appearing the week of Sept. 21 in the Proceedings of the National Academy of Sciences.

Drew’s contribution to the Open Tree of Life project involved gathering and curating green plant phylogenies. As part of this effort, Drew emailed over 2,000 authors and gathered over 2,200 trees during his two years at UFL. Of the approximately 500 curated trees included in the initial Open Tree of Life, Drew contributed over 300.

“This tree is the culmination of a massive effort by several institutions and many individuals. This tree would not have been possible, however, without the help of the many authors who contributed phylogenies to public databases and/or responded to our email requests,” said Drew.

Evolutionary trees, branching diagrams that often look like a cross between a candelabra and a subway map, aren’t just for figuring out whether aardvarks are more closely related to moles or manatees, or pinpointing a slime mold’s closest cousins. Understanding how the millions of species on Earth are related to one another helps scientists discover new drugs, increase crop and livestock yields, and trace the origins and spread of infectious diseases such as HIV, Ebola and influenza.

CONGRATULATIONS

Awards:

Professor Keith Geluso (pictured below) received the Pratt-Heins Foundation Faculty Award for Outstanding Scholarship and Research. He was honored at the Faculty/Staff Fall Convocation on Aug 21st.

To read more about this award please visit: unknnews.unk.edu/2015/08/26/geluso-luscher-crow-receive-prestigious-pratt-heins-awards/

Dianne McDole, office associate in the Department of Biology, received the Employee Achievement Award in December. Dianne first came to the department as the part-time office associate for the online Master’s program in September 2014. She transitioned to the department secretary this past summer when Judy Kuebler retired and has managed both positions responsibilities seamlessly.
Dr. Kim Carlson (pictured below with UNK Chancellor Doug Kristensen) was presented with the Leland Holdt Distinguished Faculty Award at the December commencement ceremony. This is UNK’s highest faculty award, given to a faculty member that demonstrates outstanding achievement in teaching, research and service. More information is available at: unknews.unk.edu/2015/12/18/kim-carlson-receives-holdt-distinguished-faculty-award/.

December 2015 Graduates:
Cayman Adams, Eric Beal, Allison Bennett, Mariann Britzman, David Corley, James Davis, Kelsey Dayharsh, Daniel Edgeworth, Katherine Foster, Araina Johnson, Amanda Kargol, Corrie Kezer, Mimely Little, Caryn Masters, Margaret McCord, Erin Mekhail, Brent Mullen, Bethany Munn, Jerry Ryan Saldajeno, Kelly Marks Smith

One graduate was able to make the journey to Kearney for the UNK Winter Commencement ceremony on December 18th held in the Health and Sports Center. Over 15 guests; including one graduate, her family and Biology faculty; attended the Department breakfast before the ceremony to honor our graduates.
Publications, Meetings, Grants

Meetings


Publications


Continue to send us updates on any meetings, publications, grants, or awards that you have been involved with. Please email details to msbiology@unk.edu.

Student News

Mark McKay (Spring 2011 graduate) is currently pursuing his PhD in Coastal and Marine System Science at Texas A&M Corpus Christi. He is working on both the dynamics of Estuarine systems and in particular, the paleoclimate of the region and how El Nino and the North American Monsoon has effected estuaries in the region. He also participated in a well-respected paleoclimate summer school in Urbino, Italy in 2013.
Curtis Reese (Summer 2015 graduate) presented and hosted a table at the Nebraska Association of Teachers of Science meeting in September regarding his experience in the online Master of Science in Biology program at UNK (pictured below).

Kathryn Tomelden (current distance student) welcomed her first child! Ella Marie Tomelden Stapleton was born on November 4th at 1:23pm weighing 5 lbs 10 oz (pictured right).

Please let us know what is going on in your lives; email us your news at msbiology@unk.edu.

Director’s Desk from Dr. Julie Shaffer

Happy New Years from me, Dr. Julie Shaffer; and the MS Biology Program Coordinators, Brian Peterson and Robyn Schoenebeck (pictured left)!
I hope everyone had a good 2015 and is looking forward to an even better 2016. Here at UNK we are expecting major changes in 2016. We are planning to fill our Director position by fall, so there will be a new person at the helm. We are also performing our five-year performance review this spring. (Thank you to everyone who filled out our online surveys last year.) The goal of the five-year program review is for us to review all of our programs to identify strengths and weaknesses and to find ways to improve the effectiveness and quality of all of the programs in the Biology Department. We will be proposing changes to the programs based upon our findings and the suggestions that we get from our external review. We will give you a report after the external review is complete later this spring. For now we thought you might be interested in the findings about the online master’s program, so here are some things that might be of interest to all of you. We currently have students in 47 states and 8 countries. The top 5 states for student enrollment are Nebraska (11.4%), California and Texas (tied at 6.4%), Florida (5.8%), Colorado and Pennsylvania (tied at 4.4%), and Arizona (4.1%). We don’t currently have students in Vermont, Delaware, or West Virginia. The majority of students are educators, followed by laboratory scientists (Figure 1). We also found it enlightening when we saw what your goals were for your degrees (Figure 2). This was really balanced between changing jobs, teaching, or advancing at your current position. Finally we asked alumni of the program about their experience in the program. We were excited to see that 92% of students felt they had attained their goal after getting their degree. We have provided a breakdown of the goals that 92% felt they had achieved (Figure 3). I hope everyone finds this information as encouraging as we did. Let us know if you have any questions or comments. Have a great 2016!

Figure 1. Break down of current student occupation.
Figure 2. What do you hope to achieve with the degree.

![Pie chart showing various goals and their percentages.]

- **Knowledge Enhancement**: 19%
- **Teach at college level/dual credit**: 27%
- **Career advancement or raise**: 24%
- **Pursue PhD or Professional degree**: 8%
- **Promoted at work**: 23%
- **Teaching at community college/university**: 41%
- **Received salary increase**: 44%
- **Able to enter my desired job field**: 17%
- **Went on for doctoral/professional degree**: 9%
- **Other, please specify**: 18%

Figure 3. What goal(s) did your MS degree help you attain?

<table>
<thead>
<tr>
<th>Answer</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promoted at work</td>
<td>23%</td>
</tr>
<tr>
<td>Teaching at community college/university</td>
<td>41%</td>
</tr>
<tr>
<td>Received salary increase</td>
<td>44%</td>
</tr>
<tr>
<td>Able to enter my desired job field</td>
<td>17%</td>
</tr>
<tr>
<td>Went on for doctoral/professional degree</td>
<td>9%</td>
</tr>
<tr>
<td>Other, please specify:</td>
<td>18%</td>
</tr>
</tbody>
</table>

**Other included: better understanding/knowledge of biology, satisfaction/personal goal, license renewal, teaching dual enrollment**
Office Space

Spring 2016 Deadlines:
January 11\textsuperscript{th} – Spring classes begin
January 15\textsuperscript{th} – Last day to add/drop class on MyBlue with no penalty
January 18\textsuperscript{th} – Martin Luther King, Jr. Holiday, all classes dismissed
January 21\textsuperscript{st} – E-bill notifications sent to Lopermail account
February 1\textsuperscript{st}– Last day to apply for May graduation
February 11\textsuperscript{th}– Tuition & Fees due in full
March 11\textsuperscript{th}– Last day to drop a course (no refund at this time)
March 20\textsuperscript{th} – 27\textsuperscript{th} – Spring break, all classes dismissed
April 1\textsuperscript{st} – Comprehensive Exams (for graduating students) must be returned to the Biology Dept
April 4\textsuperscript{th} – Early registration for Summer and Fall 2016 begins for all currently enrolled students
April 25\textsuperscript{th} – General Registration begins for Summer and Fall 2016 for all admitted students
May 2\textsuperscript{nd}–5\textsuperscript{th} – Final Exams
May 6\textsuperscript{th}–Graduation
May 9\textsuperscript{th} – Summer semester begins

Students planning to graduate this May 2016 must apply for graduation on MyBlue. Even if you do not plan to attend ceremony you must apply in order to receive your degree. The deadline to apply for May graduation is February 1\textsuperscript{st}. There is a $25 application fee which can be paid on-line during the application process. Commencement ceremony will take place at 10:00 am on May 6\textsuperscript{th} in the Health and Sports Center. Please consider making the trip to Kearney to walk in graduation and if you do, please let the Biology Department know.

A new travel course is available this summer 2016. BIOL 856P – Regional Field Study: Arctic Biology (3 credits) will be offered from May 9\textsuperscript{th} – July 1\textsuperscript{st}. Dr. Nate Bickford will lead the Scandinavian tour, traveling first to Iceland on May 9\textsuperscript{th} and flying out of Finland on May 26\textsuperscript{th}. For additional information on the course contact Dr. Bickford at bickfordna@unk.edu or 308-865-8410. Travel arrangements must be made soon so you should contact him right away if interested in the course.