Breakthrough Education
Success stories from everyday to extraordinary
A Message from the Dean

It is my pleasure to share the 2018-2019 annual report, featuring the many everyday and extraordinary contributions made by our graduate students, postdoctoral fellows, and faculty members.

During the past year, our trainees and mentors continually made an impact inside and outside the classroom and laboratories. Additionally, they excelled in scholarship, including awards, fellowships, and publications — many of which as first author.

The past year also saw the expansion of new training and professional development opportunities for our learners.

Finally, our graduate students and postdoctoral fellows supported the work of our faculty investigators, who continue to have an extraordinary impact in transforming lives through biomedical research.

In this report, we celebrate successes big and small as our trainees and faculty continually move forward together in innovative research that leads to extraordinary patient care for a healthier future.

H. Dele Davies, MD, MS, MHCM
Senior Vice Chancellor for Academic Affairs
Dean of Graduate Studies
From Everyday to Extraordinary

Training the Next Generation of Scientists

PhD degree-granting programs
MS degree-granting programs
certificate program in Business for Bioscientists

Graduate Studies
Our mission is to be the best place in the nation for training graduate students through exceptional health science educational and research programs, faculty mentoring, and professional skills development.

Postdoctoral Education
The mission of the Postdoctoral Education program is to promote and facilitate outstanding training and education of postdoctoral scholars and their timely transition toward independent careers.

BREAKTHROUGH EDUCATION
UNMC’s health science education programs consistently perform among the best in the nation. Graduate Studies is at the very heart of UNMC, and scholars in Postdoctoral Education are one of the main driving forces behind our success.

Our vision is to be the best place in the nation for the training of graduate students and postdoctoral fellows because we know breakthrough education comes from a combination of everyday successes and extraordinary advances. Our programs, faculty, and mentors provide a solid foundation upon which our learners build a lifetime of achievements, leaving an indelible impact on our local, national, and global communities.
Leadership

H. Dele Davies, MD, MS, MHCM
Senior Vice Chancellor, Academic Affairs
Dean, Graduate Studies

Pamela K. Carmines, PhD
Executive Associate Dean, Graduate Studies

Iqbal Ahmad, PhD
Associate Dean, Postdoctoral Education & Research, Graduate Studies

Kendra K. Schmid, PhD
Assistant Dean, Graduate Studies

Terri A. Vadovski
Director, Graduate Studies

GRADUATE COUNCIL MEMBERS & STAFF

The Graduate Council is composed of graduate program directors and members of the Graduate Studies staff. The Council, in conjunction with the Dean, is responsible for Graduate College activities at UNMC.

Chandran Achutan, PhD
Environmental Health, Occupational Health & Toxicology

Iqbal Ahmad, PhD
Graduate Studies

Keshore R. Bidasee, PhD
IGPBS Neuroscience

Laura D. Bilek, PhD
Medical Sciences Interdepartmental Areas (MSIA)

Pamela K. Carmines, PhD
CHAIR Graduate Studies

Carol A. Casey, PhD
MSIA Clinically Relevant Basic Research

Kaustubh Datta, PhD
IGPBS Biochemistry & Molecular Biology

H. Dele Davies, MD, MS, MHCM
Graduate Studies

Andrew T. Dudley, PhD
IGPBS Molecular Genetics & Cell Biology

Karen A. Gould, PhD
Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS), Medical Anatomy

Chittibabu (Babu) Guda
IGPBS Bioinformatics & Systems Biology

Gleb Haynatzki, PhD
Biostatistics

James C. McClay, MD
Biomedical Informatics

Sharon J. Medcalf, PhD
MSIA Health Practice & Medical Education Research

Aaron M. Mohs, PhD
Pharmaceutical Sciences

Scott Mulder
Graduate Student Association

Ka-Chun (Joseph) Siu, PhD
MSIA Patient-Oriented Research

Shelley D. Smith, PhD
MD-PhD Scholars Program

Joyce C. Solheim, PhD
IGPBS Cancer Research

Laurey Steinke, PhD
Biochemistry & Molecular Biology

Melissa Tibbits, PhD
Health Promotion & Disease Prevention Research

Hongmei Wang, PhD
Health Services Research, Administration & Policy

Shinobu Watanabe-Galloway, PhD
Epidemiology, Emergency Preparedness

Lani M. Zimmerman, PhD
MSIA Clinical & Translational Research Mentored Scholars Program

Matthew C. Zimmerman, PhD
IGPBS Integrative Physiology & Molecular Medicine

STAFF

Cody Phillips
Graduate Studies Specialist

Kaushik P. Patel, PhD
Cellular & Integrative Physiology

Rakesh K. Singh, PhD
Pathology & Infectious Disease

POSTDOCTORAL EDUCATION ADVISORY COUNCIL & STAFF

The Postdoctoral Education Advisory Council (PEAC) examines issues related to postdoctoral education at UNMC and provides guidance in matters related to training and recruitment.

Iqbal Ahmad, PhD
CHAIR Ophthalmology & Visual Sciences

Kaustubh Datta, PhD
Biochemistry & Molecular Biology

Sharon Del Bem Velloso de Morais, PhD
Cellular & Integrative Physiology

Terrence Donohue, PhD
Internal Medicine

Keith Johnson, PhD
Oral Biology

Luis A. Marky, PhD
Pharmaceutical Sciences

Kaushik P. Patel, PhD
Cellular & Integrative Physiology

Rakesh K. Singh, PhD
Pathology & Microbiology

Srijayaprakash Uppada, PhD
Pharmacology & Experimental Neuroscience

Huangui Xiong, MD, PhD
Pharmacology & Experimental Neuroscience

STAFF

Kimberly Norman-Collins, MA
Postdoctoral Education/Research Coordinator
Students

MAKING THEIR MARK IN BIG AND SMALL WAYS

531 students enrolled in fall 2019

› This is the largest number of students in the last 4 years and an increase of 7.5% over last year.

107 graduates earned degrees

› In 2018 – 2019, 30 students earned MS degrees and 77 earned PhD degrees.

25 different countries represented

› Students come from all over the world, with 3 of 10 students being international.

Record-Breaking Numbers
STUDENT ACCOMPLISHMENTS AT A GLANCE

$1,125,169 in external fellowship funding — an increase of 31% over last year

$1,071,483 in UNMC fellowship funding, including supplements

$569,741 in extramural contracts

$55,621 in travel awards

1,030 hours of service-learning activities

461 peer-reviewed publications, book chapters, or government reports — 78 of which had students listed as first author

343 conference presentations

95 national, regional, and local honors

29% INCREASE in publications
Honors & Recognition
EXTRAORDINARY GRADUATE STUDENTS OF 2018 – 2019

Graduate Students of Distinction

**AJ Crawford**
Cancer Research
HONOR / AUTM Foundation Susan Riley Keyes Memorial Fellowship

**Trey M. Farmer**
Biochemistry & Molecular Biology
HONOR / NCI Ruth L. Kirschstein National Research Service Award for Individual Predoctoral Fellows

**Laura E. Flores**
MSIA – Patient-Oriented Research; MD-PhD Scholar
HONOR / Yale Ciencia Academy for Career Development Fellowship

**Brandon J. Lew**
IGPBS – Neuroscience
HONOR / NIH Ruth L. Kirschstein National Research Service Award Individual Predoctoral MD-PhD Fellowship

**Ciobha A. McKeown**
MSIA – Applied Behavior Analysis
HONOR / Society for the Advancement of Behavior Analysis Sidney W. & Janet R. Bijou Grant

**Christopher M. Thompson**
IGPBS – Biochemistry & Molecular Biology
HONOR / NCI Ruth L. Kirschstein National Research Service Award for Individual Predoctoral Fellows

Convocation Award Recipients

**Rama-Krishna Nimmakayala, PhD**
Biochemistry & Molecular Biology
THOMAS JEFFERSON INGENUITY AWARD / Given to a graduate student for unmatched creativity and ingenuity in doctoral research

**Richard Lee Sleightholm, PhD**
Pharmaceutical Sciences; MD-PhD Scholar
PRAESTO AWARD / Given to the most outstanding or exceptional graduate for the academic year

Graduate Students Earn Prestigious Early-Career Opportunities

**Laura Flores**, an MD-PhD Scholar in the MSIA program, earned a spot in the 2019 cohort at the Yale Ciencia Academy for Career Development. The year-long program provides graduate students with opportunities for mentoring, peer support, and networking; for developing skills that are important for career advancement; and for contributing to their communities through science outreach.

**Kimiko Krieger**, a 2019 PhD graduate from Cancer Research, was selected as 1 of 16 early-career cancer scientists from around the country to participate in Early-Career Hill Day through the American Association for Cancer Research (AACR). This marks the second straight year Krieger was selected to participate in the event.
The Sky Is the Limit for Recent Graduate

From first-generation college student to MD-PhD Scholar, Richard “Lee” Sleightholm, PhD, MPH, has achieved extraordinary feats.

Growing up in the Midwest, Dr. Sleightholm understood the value of education. His parents dreamed of their child graduating from college, an opportunity unavailable to them. However, they never imagined just how accomplished their son would become.

Over his time at UNMC, Dr. Sleightholm received an MPH while concurrently completing his PhD, and is now in his third year of medical school at UNMC. That’s on top of the hundreds of service hours he performed outside of the lab.

“My parents sacrificed so much to ensure my brother and I were able to attend college,” explained Dr. Sleightholm. “To see my parents at graduation, where I attained a PhD with honors, was truly a privilege and my way of showing gratitude for them believing in us.”

One of the honors Dr. Sleightholm received was the Praesto Award. “I hope my efforts, along with those of past awardees, help redefine the role of graduate education and foster in a new era of multidisciplinary trainees who are involved in organizations that help improve UNMC and our communities, in addition to their research projects,” said Dr. Sleightholm.

Described by his advisor and program director, David Oupicky, PhD, as having a passion to make the world a better place – whether that be through research discoveries or individual service to others,” Dr. Sleightholm attracted prestigious fellowship funding and was heavily involved in leadership and service activities.

“As an MD-PhD student who wanted to be involved with many campus organizations and extracurricular activities, I am particularly thankful for Dr. Oupicky’s support of my involvement both inside and outside his lab. My development as a student and as a person was greatly impacted by his mentorship,” said Dr. Sleightholm.

All of his extramural activities led to Dr. Sleightholm receiving the Platinum Badge for Service Learning/Interprofessional Education. He’s only the second individual to earn this honor, which he did by completing over 300 hours of service.

“One accomplishment of which I am particularly proud is volunteering for the Big Brothers Big Sisters, which was an amazing opportunity for me outside of my work at UNMC,” said Dr. Sleightholm. “My Little has gone on to graduate from high school and has received a scholarship to college.”

“Lee is a remarkable individual. His volunteer efforts extend beyond Nebraska to his international work in Nicaragua. Together with his extraordinarily research productivity, the scope of his impact has been wide-reaching,” praised Dele Davies, MD, MS, MHCM, Senior Vice Chancellor for Academic Affairs and Dean of Graduate Studies. “I believe we are only seeing the beginning of his successful career.”

Accomplishments
- 23 publications
- 10 poster or podium presentations at international, national, regional, and local meetings
- 4.0 Grade Point Average in his graduate courses
- MPH degree in Biostatistics from UNMC while completing his PhD in Pharmaceutical Sciences

Service & Outreach
- Vice president and secretary of the Graduate Student Association
- Volunteer for Big Brothers Big Sisters
- Philanthropy chair of Student Alliance for Global Health (3 years)
- Co-creator of a summer research program for new MD-PhD students
- Volunteer and wish granter at Make-A-Wish
- Leader on Nicaragua medical service trip (3 years)

Honors
- 2019 Praesto Award from UNMC Graduate Studies
- 2019 Platinum Badge for Service Learning/Interprofessional Education from UNMC Graduate Studies
- 2018 Graduate Student of Distinction from UNMC Graduate Studies
- 2018 Student Research Conference Poster Award from UNMC College of Public Health
- 2017 Journal of Surgical Oncology Don Morton Award
- 2017 Student Impact Award from UNMC Student Senate
- 2016 1st Place Poster Presentation at APSA Midwest Region Meeting
- 2016 1st Place Podium Presentation at the UNMC Biopharmaceutical R&D Symposium
External Training Opportunities Offer a Real-World Perspective

PhD training is more than just research aptitude. It’s also about developing leadership skills — and perhaps most of all, the ability to solve problems in a variety of environments or situations. Several PhD graduate students were able to put these skills to work when they obtained positions working with industry leaders:

Deep Bhattacharya, a 2019 PhD graduate from Pharmaceutical Sciences, returned from a six-month co-op at GlaxoSmithKline in Rockville, MD, where he participated in vaccine development. Although his co-op focused on honing research skills, Bhattacharya’s work also involved a multi-level research-oriented discussion across sites in UK and Belgium, as well as networking in the U.S. The experience gained through the co-op proved pivotal in securing his existing role as Senior Scientist in the Formulation and Process Development Department at Pfizer.

Nicholas Wojtynek, a PhD student in Cancer Research, participated in a 12-week summer internship with Takeda Oncology at its U.S. headquarters near Boston. Wojtynek worked at Takeda’s global medical affairs department, on the publications team. This wasn’t lab work — instead, he worked on publications and presentation of data and clinical trials results.

Zhen (Jennifer) Ye, a PhD candidate in Pharmaceutical Sciences, obtained a 12-week internship at AstraZeneca in San Francisco. Her work was to build population pharmacokinetic (PK) profiles and modeling for a new biologic drug, an indispensable step for new drug clinical applications. This internship provided hands-on experiences of how to put book-learned PK knowledge into practical use. The internship also shed light on how people in the industry collaborate with each other to put a new drug into clinical trials.

Students Gain Critical “Soft Skills”

The Professional Development Lunch & Learn Series promotes the development of soft skills that are just as critical for success as the hard skills garnered in academic training. The series focuses on helping graduate students and postdocs grow communication, critical thinking, teaching, wellness, and other skills that transfer from job to job and are useful regardless of a chosen career track.

199 STUDENTS attended the training

There were 141 students who attended more than one live training session.

30+ ADDITIONAL EVENTS on other NU campuses

UNMC, UNO, UNL, and UNK partnered to jointly offer Career & Professional Development events for graduate students across all NU campuses.

TOP 3 ATTENDED EVENTS at UNMC campus

» How to Combat the Amygdala Hijack
» Overcoming the Bully Brain
» Difficult Conversations & Conflict Resolution: Small Changes, Big Results

Students Learn the Value of Service Learning

The Service-Learning/Interprofessional Education Badge Program empowers graduate students to document time spent participating in important activities that advance their careers. The badges are a quick and easy-to-grasp way — in an NIH-style biosketch, for example — for an outside audience to see a student’s commitment to service learning and professional development.

23 REFLECTIONS submitted by students for interprofessional or professional development activities.

PLATINUM BADGE awarded to Dr. Richard (Lee) Sleightholm, making him only the second individual to earn the highest badge possible.

1,030 HOURS of activities recorded in written reflections by the students.

30+ ADDITIONAL EVENTS

UNMC, UNO, UNL, and UNK partnered to jointly offer Career & Professional Development events for graduate students across all NU campuses.
During 2018 - 2019, over 140 postdoctoral scholars trained at UNMC.

The median time our postdocs spend training at UNMC is a little over 1 year.

Faculty across colleges and institutes provide training to postdocs.

Record-Breaking Numbers

POSTDOC ACCOMPLISHMENTS AT A GLANCE

- $175,000 in fellowship and grant support received from the U.S. Department of Agriculture and NASA
- 161 peer-reviewed publications, book chapters, or government reports written — 66 of which had postdocs listed as first author
- 100 conference presentations given
- 92 professional development events attended

TOP 3 REASONS POSTDOCS CHOSE UNMC

- Principal investigator/mentor reputation
- Future career opportunities
- UNMC reputation
Determination
Postdoctoral Excellence in Research Award Represents Future Successes for Postdoc Researcher

Arpita Chatterjee, PhD, a postdoc in the Department of Biochemistry & Molecular Biology, was the 2018 recipient of the annual Postdoctoral Excellence in Research Award.

Dr. Chatterjee joined UNMC in 2015. Working under the mentorship of Rebecca Oberley-Deegan, PhD, Dr. Chatterjee quickly became an integral part of the department’s success.

“Arpita continues to demonstrate her abilities, positively impacting our lab. She has a unique skill set in always keeping things in perspective. Arpita has a very positive attitude and sees the best of a situation,” praised Dr. Deegan.

Dr. Chatterjee credits mentorship for encouraging her along her career path.

“I especially thank my mentor, Dr. Deegan, for constantly inspiring me to apply for this award. Her support has proven invaluable in my experience as a postdoc.”

Winning the award is very competitive. Not only do postdocs have to apply to be considered, they also have to give an oral presentation to peers and faculty, who then determine the winner.

Dr. Chatterjee believes the award is a great motivator for researchers. “Recognition is a valuable asset for collaborative research, and biomedical research needs a collaborative effort to answer a big question,” she said.

Dr. Chatterjee also talked about the opportunities this award presents to her. “The Postdoctoral Excellence in Research Award is an immense motivator for me to constantly challenge my own ability to think better and do better,” she said.

“This award gave me recognition in the UNMC postdoctoral community, which will help me with future collaborative research. Additionally, to get research funding, awards carry big value on the funding application,” Dr. Chatterjee explained.

“This award will help demonstrate my capability and increase the likelihood of receiving funding.”

- DR. ARPITA CHATTERJEE

While Dr. Chatterjee is a highly skilled researcher, she is also very creative. In addition to being a talented painter, she’s also published stories and essays in her native tongue.

Dr. Chatterjee’s goal is to solve unanswered questions in biomedical research, especially on better treatment options for cancer patients.

Dr. Deegan commented on Dr. Chatterjee’s bright future. “Arpita has proven to be an independent thinker and a very intelligent and curious postdoc. She is a great teacher and researcher, so I see her being successful in both those areas.”

Key Accomplishments & Honors
16 publications, 7 of which as first author
2018 Postdoctoral Excellence in Research Award
2017 Distinguished Poster Award, Redox Biology Center Retreat
2016 Postdoctoral Excellence in Research Award Runner-Up

POSTDOCTORAL EXCELLENCE IN RESEARCH AWARD RUNNER-UP

Shixuan Chen, PhD, Surgery
Mentor: Jingwei Xie, PhD
“I could see myself actually working in a lab one day,” said Ashley Gomez, a recent Metropolitan Community College (MCC) graduate who is now enrolled in the biotechnology program at the University of Nebraska Omaha.

Gomez and fellow trainee Juan Garcia, an MCC graduate now at Creighton University, are the most recent students to take advantage of a collaborative partnership between UNMC’s Postdoctoral Education Office and MCC’s Department of Mathematics & Natural Science.

The partnership allows MCC students to spend two days a week at UNMC shadowing a postdoc researcher, who, in turn, spends two evenings a week teaching classes at MCC. It grew out of a seminar series on professional opportunities for postdocs in 2015. One seminar on careers away from the bench was about teaching, and among the speakers were educators from MCC.

The UNMC experience offers MCC students a chance to see real, cutting-edge medical research, said Alan Wasmoen, EdD, Professor of Biology at MCC.

For some students, the chance to work side-by-side with a researcher has cemented their decision to pursue laboratory research opportunities; for others, observing the demands on a successful medical researcher may confirm their choice of another career. Either way, the time spent will have been worthwhile.

- DR. ALAN WASMOEN

On the flip side, the opportunity to teach two nights a week has been invaluable for Andrew Stothert, PhD, a postdoc researcher in the Department of Ophthalmology & Visual Sciences.

Teaching students is so different from the scientific presentations you give at conferences. You learn how to connect with the students and make things interesting without all the jargon.

- DR. ANDREW STOTHERT

Fellow postdoc Sharon Morais, PhD, agreed:

“I had a wonderful experience participating in the apprenticeship while I was a postdoc. This opportunity opened new doors and showed me a new future direction other than only science. After this experience, I became an instructor at MCC and a researcher in the UNMC Department of Pathology & Microbiology.

- DR. SHARON MORAIŞ
Faculty
MENTORING TRAINEES FOR FUTURE SUCCESS

529 faculty teach graduate students
Faculty from all 6 colleges and 2 institutes teach and mentor graduate students.

56 UNMC faculty newly appointed to the NU Graduate Faculty
Over 40% of graduate faculty at UNMC have worked here for 10 years or more.

7 of 10 are senior-ranking faculty
44% of UNMC graduate faculty hold the rank of professor, while 30% are associate professors.

Record-Breaking Numbers
FACULTY ACCOMPLISHMENTS AT A GLANCE

- 1,024 peer-reviewed publications, book chapters, and government reports
- 697 boards or committees on which faculty serve
- 605 conference presentations
- 494 students taught in the previous academic year
- 134 postdocs mentored in the previous academic year
- 102 international, national, regional, and local honors
Honors & Recognition

EXTRAORDINARY FACULTY OF 2018 – 2019

Outstanding Mentor of Graduate Students

PRESENTED BY THE FACULTY SENATE // Recognizes faculty who exemplify excellence in the mentoring of graduate students

David Oupicky, PhD
Professor & Parke-Davis Chair in Pharmaceutics, Pharmaceutical Sciences

"My hope is that I have made at least a small positive difference in the lives and careers of all my students. Mentoring allows me to spend a significant amount of time observing and shaping the growth and maturation of my students. When they start owning their research projects is one of the most important milestones in their growth into independent scientists."

Wallace B. Thoreson, PhD
Vice Chair of Research & Gilmore Professor, Ophthalmology & Visual Sciences

"Seeing students grow in ability and confidence as they master increasingly challenging intellectual, technical, and analytical skills is one of the greatest rewards of mentoring. I have enjoyed seeing students and postdocs move on to positions and careers in which they find personal and professional fulfillment."

Wayne W. Fisher, PhD
H.B. Munroe Professor of Behavioral Research, Munroe-Meyer Institute

"I was honored and humbled to receive this award. I have received several awards for my research, but the mentoring award meant much more because it was my students who nominated me. Mentoring often results in a meaningful and lasting bond that is rewarding for both the mentee and the mentor.

One of the highlights of my career was when I was elected editor of the flagship journal in our field, the Journal of Applied Behavior Analysis. I realized that I had made a meaningful difference in a mentee’s career when she became editor of that same journal and thanked me for helping her achieve that high honor."

Distinguished Graduate Student Mentor Award

PRESENTED BY THE GRADUATE STUDENT ASSOCIATION // Recognizes faculty for their efforts in training, mentoring, and helping students excel in their studies and research

Kim Rothgeb
IGPBS Coordinator

"I was very surprised and humbled to receive this award. Seeing our students’ success and achievements is one of the greatest joys of my job, and I feel blessed to know I have made a difference in their lives, both academically and personally."

STAFF MEMBER HONORED FOR HER COMMITMENT TO STUDENTS AND FACULTY

CATALYST FOR EDUCATION AWARD // Presented by the Interprofessional Academy of Educators to an individual in an educational support role whose contributions are integral to furthering UNMC’s educational mission

Kim Rothgeb
IGPBS Coordinator
Innovation

New Training Programs Advance Our Educational Impact

Graduate Studies launched three new programs that present exciting opportunities to meet both the needs of students as well as the regional and national workforce. Planning and implementation occurred in 2018, with enrollment starting in the 2019-2020 academic year.

**APPLIED BEHAVIOR ANALYSIS MASTER’S PROGRAM**

The Applied Behavior Analysis (ABA) Program prepares students to be behavioral health practitioners with advanced knowledge and skills related to the provision of behavioral therapy for children and adolescents, including those with behavioral and neurodevelopmental disabilities.

The program is administered jointly by the Munroe-Meyer Institute (MMI) and the University of Nebraska Omaha (UNO). Although the new ABA Program officially launches in the 2019-2020 academic year, the two areas have been collaborating on this topic since 2007.

“There is a documented shortage of behavioral health providers in Nebraska, particularly providers who have the training to work with children and adolescents with intensive behavioral needs and those with intellectual and developmental disabilities. This program directly addresses that provider shortage,” said Mark Shriver, PhD, ABA Program Director.

**BIOINFORMATICS & SYSTEMS BIOLOGY DOCTORAL PROGRAM**

The Bioinformatics & Systems Biology (BISB) Program covers a wide array of topics to address questions in biomedical research from novel algorithm development to the application of bioinformatics tools for knowledge discovery.

The program is jointly administered by UNMC and UNO, fully leveraging each university’s unique resources in genomics, bioinformatics, computer science, mathematics, statistics, systems biology, and more. Students will be the beneficiaries of truly interdisciplinary training, as they are mentored by faculty with expertise from pure wet lab research to pure computational research.

"Bioinformatics and systems biology has become an integral part of basic, clinical and translational research, warranting the need to develop a workforce with advanced quantitative, computational, and analytical skills. The BISB Program addresses this need to train the next-generation scientists who can serve multidisciplinary research areas in life sciences and information sciences,” said Babu Guda, PhD, BISB Program Co-Director at UNMC.

**HEALTH PRACTICE & MEDICAL EDUCATION RESEARCH DOCTORAL PROGRAM**

The Health Practice & Medical Education Research (HPMER) program was created under the leadership of Laura D. Bilek, PT, PhD, College of Allied Health Professions, and Sharon Medcalf, PhD, College of Public Health, to support two growing scholarly areas of interest within the Medical Sciences Interdepartmental Area (MSIA).

The first area of interest was for students seeking to pursue a PhD in Emergency Preparedness, a growing career field due to new accreditation requirements in the healthcare and public health sectors. The second area of interest is to support the growing trend toward innovative approaches to health professions education, especially in the e-learning and simulation technology spheres.

“The opportunities to explore the simulation learning field increases exponentially as the Davis Global Center for Interprofessional Educations opens, and our incoming students learn through immersive and interactive simulation experiences. Both scholarly areas need evidence-based research to eventually guide practice, and we are excited to follow the next generation of researchers as they advance these fields,” said Dr. Medcalf, HPMER Program Director.
Assessment Initiative Achieves Major Accomplishments

Since 2017, the UNMC Graduate Studies Assessment Initiative has reached several important milestones on the journey to ensuring graduate students meet certain universal core and co-curricular competencies.

**MILESTONES**

- Established learning outcomes including:
  - Discipline knowledge
  - Critical thinking
  - Research skills
  - Professional behavior
  - Communication skills
- Developed a rubric for assessment of learning objectives
- Implemented a standard syllabus template for all courses
- Developed and approved a policy for timeline of Comprehensive Exam

**NEXT STEPS**

- Finalize curriculum maps
- Faculty participate in training on curriculum maps in AEFIS

Communication Course Makes Public Speaking Easier

A large part of being a researcher is giving poster and podium presentations, along with speeches to potential donors, the media, and other laypeople. Yet public speaking does not come naturally to most people, nor do they receive training in it. This means new scientists have a steep learning curve that often results in boring talks and bad presentations.

However, a new course taught by Adam Case, PhD, Assistant Professor of Cellular & Integrative Physiology, is helping to prepare students for this much dreaded task.

Starting in the 2019 – 2020 academic year, “Scientific Communication” offers graduate and professional students formal training in developing the communication skills needed to present various forms of oral scientific presentations.

“We aim to arm students with key communication skills so they can effectively explain their work with confidence. The class provides students with tools, tips, and tricks to make their seminars, elevator pitches, chalk talks, posters, and public communications a success.”

- Dr. Adam Case
Survey Results Yield Key Insights into Alumni Career Paths

Graduate Studies has analyzed responses from the first round of surveys aimed at gathering information from PhD alumni regarding their career paths. The surveys are part of the national PhD Career Pathways Project of the Council of Graduate Schools.

- 94% of alumni have a job related to their PhD training.
- 100% felt they were prepared for their current job by their PhD training.

Integrity was reported most frequently to be an extremely important attribute/skill for alumni’s current jobs.

Additional attributes/skills considered extremely important by ≥60% of these alumni include:
- Initiative
- Analytical thinking
- Dependability
- Attention to detail

Dissertation Boot Camp Brings Students One Step Closer to a PhD

Writing a dissertation can be a daunting task, making it easy to become unmotivated or distracted — which is why many students have turned to Dissertation Boot Camp for help.

Held two times a year, the four-day training empowers PhD candidates to become focused, productive dissertation writers. Attendees receive tips and strategies to overcome writing obstacles, in addition to dedicated writing time each day.

“Boot camp provided an opportunity for me to identify my hurdles in the writing process and gain access to experts that had advice on overcoming specific struggles, reference management, distraction mitigation, and similar issues,” said Cassandra L. Hays, a 2019 Boot Camp attendee and PhD student in Integrative Physiology & Molecular Medicine. “My biggest hurdle is, frankly, just getting started; but boot camp provides an atmosphere of accountability (and coffee) that encouraged my progress!”

Faculty also recognize the value Dissertation Boot Camp can provide and have referred multiple students to the training.

“I encourage my students to participate in the boot camp because it provides them with protected time to focus on the development of their writing skills as they receive constructive feedback,” explained Max J. Kurz, PhD, Associate Professor at Munroe-Meyer Institute.

Learning how to become a better scientific writer is essential not only for a dissertation, but also for becoming an independent investigator.”

- DR. MAX J. KURZ

Since the boot camp launched in 2016:

- 78 students have completed the training, with 2 of those students completing it twice.
- 3 of 4 participants have successfully defended their dissertations.

Ongoing Successes

Angledouble-right Ongoing assessment of graduate student competencies

Angledouble-right 5-year external review of programs

Angledouble-right Analysis of all data from PhD Career Pathways Project

Angledouble-right New mechanism to ensure 100% compliance of Responsible Conduct in Research requirements

Angledouble-right Postdoc surveys to evaluate Postdoctoral Education programs and services and to measure the impact of postdocs at UNMC

Angledouble-right Continued collaborations with UNK, UNL, and UNO for in-person and online graduate student career and professional development events

3 Years after PhD

- 33% in Education
  - alumni hold positions in post-secondary education (teaching is primary activity)
- 32% in Training
  - alumni are pursuing further training
- 16% in Business
  - alumni work in the business sector

8 Years after PhD

- 33% in Business
  - alumni work in the business sector
- 28% in Research
  - alumni work at a research university
- 15% in Education
  - alumni hold positions in post-secondary education (teaching is primary activity)

15 Years after PhD

- 43% in Education
  - alumni hold positions in post-secondary education (teaching is primary activity)
- 38% in Business
  - alumni work in the business sector
- 14% in Research
  - alumni work at a research university

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PLANS FOR THE FUTURE

Looking Ahead to 2019 – 2020

Graduate Studies and Postdoctoral Education are working to launch new programs and services designed to help students and postdocs with their career goals. Key areas of focus will be:

- Ongoing assessment of graduate student competencies
- 5-year external review of programs
- Analysis of all data from PhD Career Pathways Project
- New mechanism to ensure 100% compliance of Responsible Conduct in Research requirements
- Postdoc surveys to evaluate Postdoctoral Education programs and services and to measure the impact of postdocs at UNMC
- Continued collaborations with UNK, UNL, and UNO for in-person and online graduate student career and professional development events

ANNUAL REPORT 2018-2019

CAREERS AFTER EARNING PhD

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