

LA & S News

A newsletter of the College of Liberal Arts & Sciences at Northern Illinois University
Summer 2000

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FROM THE DEAN

In this issue of *LA&S News*, we look to the new millennium. Here in the college, our research efforts in the humanities, the social sciences, and the natural sciences have deepened our understanding of the world and ourselves; and the many accomplishments of our faculty in both scholarship and teaching continue to provide our students with inspired, cutting-edge instruction while enhancing NIU's reputation.

In past newsletters, we have described the accomplishments of our recent Presidential Teaching and Research Professors, as well as LA&S professors who have been awarded the university's prestigious Excellence in Undergraduate Teaching award. I am very proud to note that this past year five faculty members in our college received Presidential Teaching or Research Professorships and two others received the Excellence in Undergraduate Teaching award. You'll read about them in this issue and witness the high quality teaching and research that continue to be a hallmark of the college.

And what else do we envision for the college in this new millennium? As you'll see, our newest Ph.D. program in physics has been authorized by the Illinois Board of Higher Education. The program builds upon our strengths in elementary particle physics and materials science and our long-standing relationships with Fermi and Argonne Laboratories.

You will also read about the launching of a new Cognitive Studies initiative designed to facilitate and strengthen multidisciplinary research and teaching in the college. Four new faculty hires, one each in anthropology, computer science, linguistics, and psychology, have been coordinated so that the research expertise of one will complement another's. Each new faculty member is focused on the way in which his or her discipline understands the processes and structures underlying language and linguistic comprehension. This is an area of considerable theoretical and applied interest and one that could easily incorporate research interests of faculty in other departments in the college and the university.

During the past year, the college also offered a new Freshman Preceptorial as a means of introducing new students to ways of approaching academic and intellectual questions that have traditionally characterized a liberal education. It provides students a framework within which

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Dean Frederick L. Kitterle

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to better understand the relationships among courses in general education, the electives, and their chosen majors, as well as a means for students to significantly interact with faculty as they address questions of personal identity and the value of a liberal arts and sciences education.

This edition of the newsletter will also describe an exciting collaborative initiative developed by the College of Liberal Arts and Sciences and the College of Visual and Performing Arts, which is designed to enhance students' undergraduate experience. The initiative, known as Plan One, will increase thematic linkages among courses in general education and is a way in which faculty and students can benefit by understanding the relationships of knowledge and ideas in various disciplines across the two colleges.

In addition to those new initiatives I have outlined above, I am very pleased to note that our students continue to benefit from the colleges' commitment to the collaborative and multidisciplinary approach to teaching and research as embodied in our Freshmen Interest Group (FIG) program, which provides curricular and extracurricular opportunities to more than 600 students a year, and our Undergraduate Research Apprenticeship (URAP) program, which to date has provided monetary and scholarly support to more than 200 students. In this issue, you will read about the inspiring visit of Buck O'Neil, legendary Negro League baseball player, as the inaugural speaker in the FIG lecture series, and of the latest URAP recipients and their faculty mentors. I am very proud that both the FIG and URAP programs have become insti-

tutionalized and will continue to provide valuable support and opportunities for our students.

These are but the latest developments currently underway in the college. In future issues, you will read about our recently approved Center for the Prevention of Family Violence and Sexual Assault, a new Environmental Management Systems Initiative, and new developments in our Writing Across the Curriculum program, as well as features on our newest Presidential and Research Professors.

In the meantime, I hope you'll enjoy this issue of LA&S News, and join me in celebrating the many accomplishments of our faculty and programs that continue to make NIU a major resource for the state, the nation, and the world.



ILAS 101 Students (see related story on page 5)



Several people with connections to the NIU anthropology department attended the conference that marked the 100th anniversary of the discovery of the Krapina Neanderthals. From left: James C. Ahern (M.A. - NIU, 1993), Ivor Karavanic (Visiting Scholar - NIU, 1997), Patricia Sothman Vinyard (M.A. - NIU, 1994), Fred Smith (Professor - NIU, 1990-present), Todd Yokley (M.A. - NIU, 1999)

URAP!*

*Undergraduate Research
Apprenticeship Program

Spring 2000

URAP Projects and Participants

Anthropology

Prof: Michael Kolb
Student: Alan Dolan
Virtual Archaeology

Biology

Prof: Linda Yasui
Student: Liam Miller
*Radiation-Induced Clustered DNA
Damage*

Prof: Virginia Naples
Student: Daniel Lopez
*Improving the Portrait of an
Endangered Species*

Prof: Gabriel Holbrook
Student: Wendy Ayala
*Making Biochemical Inhibitors of
Photosynthesis in Plants*

Prof: David Lotshaw
Student: Dionna Pendleton
*Regulation of Membrane Excitability
in Control of Cell Function*

Prof: Bethia King
Student: Karen Burnell
*Mating & Repulsion in a Non-Stinging
Wasp*

Chemistry/Biochemistry

Prof: Qingwei Yao
Student: Kelly Cunningham
*Fluorous Dendrimers: New Catalyst
Carrier and Reusable Support for
Organic Synthesis*

Prof: Lee Sunderlin
Student: Terry Heil
*Periodic Trends in Chemical Bond
Strengths*

URAP is jointly sponsored and funded by NIU's College of Liberal Arts and Sciences and the Graduate School. It offers selected undergraduates the opportunity to develop research skills by offering them monetary and scholarly support and significant apprenticeships with senior faculty. To date, URAP has supported more than 200 students.

Prof: Andrew Hansen
Student: Courtney Wehrheim
Viral Infectivity Factor from HIV-1

Communications

Prof: Angela Powers
Student: Rachael McKiness
*Journalism Today: Coverage of
Women's Issues in the News Media*

Economics

Prof: Judy Temple
Student: Melissa Koprek
*Do Good Chicago High Schools
Make a Difference?*

English

Prof: Mark Kipperman
Student: Sara Buck
*Shelley's Prometheus Unbound and
the Critics*

Geology

Prof: James Walker
Student: Bernie Scheller
*Magmatic Variations Across the
Cascade Subduction Zone*

Prof: Ross Powell
Student: Michelle Fager
*How Will Alaskan Glaciers React to
Global Warming?*

Prof: Mark Fischer
Student: David Keating
Evolution of Fault-Related Folds

Prof: Eugene Perry
Student: Erica Barrow
*How Does Human Activity Affect the
"Health" of a Northeast Illinois
Wetland System?*

History

Prof: Sundiata Djata
Student: Aubrey Battee
A History of Blacks in Tennis

Philosophy

Prof: Michael Gelven
Student: Tom Nugent
Talking and Discovery

Physics

Prof: David Hedin
Student: Michael Eads
Particle Detection Techniques

Political Science

Prof: Daniel Kempton
Student: Susan Balc
*High Seas Satellite Launches:
Paragon of Post Cold War Coopera-
tion or Unregulated Danger?*

Psychology

Prof: Keith Millis
Student: Brittany Bergstrand
*Is Beauty in the Mind of the
Beholder?*

Prof: Susan Frauenglass
Student: Jennifer D'Souza
*Video Interactions to Improve
Children's Healthcare*

Prof: Susan Frauenglass
Student: Kertrell Deal
The Internet Health Project

Prof: David Valentiner
Student: Tracy Muklewicz
*Emotional Processing and Cognitive
Restructuring*

Prof: David Valentiner
Student: Elizabeth Opprieicht
Categories of Suicidal Ideation

Sociology

Prof: Kristen Myers
Student: Passion Williamson
*Race Talk: The Reproduction of
Prejudice in Private Conversations*

FIG LECTURE SERIES OPENS WITH BASEBALL GREAT

Buck O'Neil Inspires Students, Staff, Faculty, and Community Members

John "Buck" O'Neil, one of the greatest Negro League baseball players and the first African-American coach in Major League Baseball, was the inaugural guest speaker in the College of Liberal Arts and Sciences' FIG lecture series last fall.

In addition to his public lecture—"Striving for Excellence: Reflections on My Years in the Negro Baseball League"—which he presented to an enthusiastic audience of some 500 people in the Carl Sandburg Auditorium of NIU's Holmes Student Center, O'Neil also met with students enrolled in the residential FIG program, where he spoke to a standing room only audience of students about his life and experiences and the importance of taking advantage of their own educational opportunities. He also met with other students, staff, faculty, and community members in a number of smaller group meetings and at a highly successful book signing where he autographed copies of his autobiography *I was Right on Time: My Journey from Negro Leagues to the Majors*.

"O'Neil's visit was a tremendous inaugural for our FIG lecture series," said LA&S Dean Frederick Kitterle. "He is an important figure and a compelling voice of our time and our society, not only for the many baseball fans who admire him but for others interested in 20th-century American history."

O'Neil, who spent more than 60 years in professional baseball, began as a first baseman with the Kansas City Monarchs, where he led his

team to three Negro League Pennants in 1938, 1941, and 1946, and a world championship in 1942.

After being named manager of the Monarchs in 1948, he led the team to the 1953 Negro American League pennant. He was hired by the Chicago Cubs as a scout in 1955 and signed such players as Ernie Banks, Lou Brock, and Joe Carter. O'Neil later changed the course of history when he became Major League Baseball's first African-American coach with the Cubs in 1962.

In recent years, he has become the living voice and memory of the Negro Leagues, appearing in Ken Burns' documentary "Baseball," seen by millions on PBS, and serving as

the chairman of the Negro League's museum in Kansas City.

The 88-year-old O'Neil made a tremendous impression on the audience as he laughed and chatted and hugged audience members for a full half-hour before his lecture. During his lecture he moved the audience with his remembrances of his beloved wife of 51 years, Ora Owen, and later regaled them with stories of his experiences with such Negro League greats as Cool Papa Bell, Oscar Charleston, Buck Leonard, Josh Gibson, Jackie Robinson, and Satchel Paige, all of whom were his competitors and friends.

Many students in the audience were impressed with O'Neil's humanity. Jen Lull, a freshman, was particularly impressed with O'Neil after watching him interact with the crowd before the lecture. "You could really tell that he is a caring person—hugging and greeting people," Lull said. "It shows that there are good people out there."

Sophomore Amir Mohabbat noted that "it was important to hear his message. He is passing on his knowledge to another generation." Junior Anton April added that "he had a lot of inspiring things to say that I will bring with me for the rest of my life."

O'Neil will return to NIU in September.



John "Buck" O'Neil

LA&S OFFERS NEW FRESHMAN PRECEPTORIAL

In ILAS 101 Students Address Questions of Personal Identity and the Collegiate Experience

As students begin their freshman year, they often wonder about the purpose behind NIU's general education requirements. Why do I need to take "gen ed" classes? What's the point of taking classes not clearly related to my major? Why do I have to choose courses from areas I'm not interested in?

During the fall 1999 semester, the College of Liberal Arts and Sciences offered for the first time a new course designed to help answer questions like these. Modeled on courses often taught at small liberal arts colleges and variously called freshman seminars, pro-seminars, or preceptorials, the new course—ILAS 101—helps establish a framework for students' academic experience by introducing them to the ways of approaching questions that have traditionally characterized liberal education.

"The course is designed to help students make connections between ideas, disciplines, and seemingly disparate concepts and provide them with an understanding of the ways in which the three divisions of our college (humanities, social sciences, and sciences) address questions of personal identity and the value of an education in the liberal arts and sciences," says Sue Doederlein, associate dean of the college and professor of English who conceived and helped develop the course.

Doederlein and Robin Moremen, director of undergraduate studies and a professor in sociology, taught the course. Robert Wheeler, associate dean of LA&S and a professor of mathematical sciences, and Amy Levin, director of NIU's Center for Women's Studies and an English professor, provided guest lectures. Together, the four faculty members represent the three divisions of the college's curriculum.

The fall class was limited to twenty-five students who read primary texts, attended lectures by the four senior faculty members, and wrote reaction papers in response to the readings and lectures. To increase the desired effect of introducing new students early to the liberal arts and sciences, the class met twice a week for the first half of the semester, notes Doederlein.

"Such a scheduling plan allowed the student to have extra exposure to faculty and to the course content before midterm," she says, "thus freeing the student's schedule at a particularly hectic time in the first semester, when other course work normally becomes more demanding."

Because ILAS 101 will be offered to incoming freshmen and carries one hour of academic credit, it may appear no different than the UNIV 101: University Experience course already offered at NIU. But there are significant differences between the two courses, says Doederlein.

"UNIV 101 is designed to help students make the transition from high school to college life," she observes. "It introduces them to university resources and helps them manage their time, develop their study skills, and adjust to the academic, personal and social changes of college life. In contrast, ILAS 101 introduces students to the structure of the academic material that shapes their current and future studies. The course explores the nature of the academic disciplines that form the liberal arts and sciences."

The texts for ILAS 101 are chosen to reflect perspectives from the humanities, social sciences, and sciences. Books for the fall 1999 semester included:

Barrett, Andrea. Ship Fever. In this collection of short stories and a novella, Barrett weaves together fictional and historical characters with the world of science as background.

Kotlowitz, Alex. There Are No Children Here. Kotlowitz, a journalist, views the lives of a family in Chicago's Henry Horner Homes and captures the despair of urban poverty in the "Other America."

Thomas, Lewis. Lives of a Cell. Thomas, an internationally recognized physician and former dean at Yale Medical School, blends hard science with the spirit of a poet to capture the interdependence of all living things.



*Robin Moremen, Robert Wheeler, Sue Doederlein
Not Pictured: Amy Levin*

DEPARTMENT OF PHYSICS NOW OFFERS PH.D.

New Program Strengthens Ties with Argonne and Fermi Labs

The College of Liberal Arts and Sciences realized a long-standing dream when the Illinois Board of Higher Education (IBHE) authorized NIU to offer a Ph.D. in physics.

The new program, which formally began in the spring semester of 2000, strengthens NIU's existing partnerships with two of the premier scientific research laboratories in the world—Fermi National Accelerator Laboratory near Batavia and Argonne National Laboratory near Bolingbrook—and will enhance the university's stature while providing additional opportunities for students.

"Northern waited three decades for state approval of its Ph.D. program in physics, but excellence does win out in the end," says LA&S Dean Frederick Kitterle. "Many people worked collaboratively and very hard to ensure that this dream would become a reality."

"This is a monumental event for the university," adds former NIU president John E. La Tourette, who, as a longtime champion of the program, saw it finally become a reality shortly before his retirement from the university. "We always have had excellent faculty, an exceptionally strong research base, and highly productive partnerships with Fermilab and Argonne. The Ph.D. in physics will add to NIU's prestige in the region, state, and nation, and will certainly produce scholars for business, academia, government, and industry research facilities."

John Peoples, Fermilab director, agrees, noting that the new program promises to "bring Northern to the front rank of high energy physics and materials science. The university will attract graduate students of excep-

tional talent in these areas, and they, in turn, will contribute to the region by staying and contributing their skills to Illinois. Thus it will be another step in making northern Illinois one of the very strong high-tech regions in the country."

Observing that the program "was long overdue," Gopal Shenoy, director of experimental facilities at Argonne's Advanced Photon Source (APS), adds that "the physics department at NIU is already a strong partner in research with Argonne. The Ph.D. program will enhance this partnership with the APS, both in research and education."

Acting provost Lynne Waldeland, who, as assistant provost for academic planning and development, worked closely with Dean Jerrold Zar of NIU's Graduate School and the physics department to develop the 31-point proposal for the program, notes that the existing strengths of the physics department in elementary particle physics and materials science, along with the 1995 opening of Faraday West, the \$30 million facility housing NIU's chemistry and physics programs, bolstered NIU's proposal by assuaging any concerns over programmatic aims or space or equipment needs.

"In order to be able to get a new program, you must have the resources pretty much in place," says Waldeland. "We are able to provide this program at a very reasonable cost to the state, and we believe that the resources already committed to physics make it a really good deal for Illinois."

Physics department chair John Shaffer observes that approval of the program was "a watershed event," inasmuch as it brings additional stat-



Physics Professor Clyde Kimball and former President John La Tourette toast the new Ph.D. program

ure and prestige to the department, as well as more opportunities for outside funding to supplement the department's average of about \$1.5 million in annual external research funding.

Moreover, continues Shaffer, "in physics, the Ph.D. is the ultimate degree, but I also think it will strengthen all of our programs up and down. All of our students, graduates and undergraduates alike, will absolutely benefit from this."

Over the years, Northern has developed strong ties with the research community at both Fermilab and Argonne. Since 1987, NIU faculty and students have been members of the DZero collaboration, a team of experimenters studying the top quark in particle collisions at Fermilab's Tevatron, the world's most powerful particle accelerator. And at Argonne, an NIU team continues its collaborations with the lab's scientists on the APS, the accelerator that generates the world's most powerful x-rays to examine the most complex materials at the molecular level.

The NIU program is designed to accommodate different needs of its students, and, unlike many Ph.D. programs, Northern's will serve both part-time and full-time students. Many courses will be offered at night or on weekends, and some will be offered at Fermilab and Argonne.

LA&S AND V&PA SHARE A NEW GENERAL EDUCATION INITIATIVE

In New Approach, Colleges Collaborate on Undergraduate Offerings

In an innovative new approach that promises to significantly enhance general education at NIU, the Colleges of Liberal Arts and Sciences (LA&S) and Visual and Performing Arts (V&PA) have begun collaborating in the delivery of some general education courses.

The new focus—known as Plan One—builds upon LA&S’s highly successful Freshman/Focused Interest Group program and links existing courses in general education through particular themes.

Implemented for the first time in the fall 1999 semester, the initiative links various general education courses in biological sciences, geology, physics, anthropology, economics, philosophy, theatre, communication, sociology and art around four main themes: Beauty; Civilization; Community; and Science, Society, and Culture.

Deans Frederick Kitterle of LA&S and Harold Kafer of V&PA believe the program will promote the integration of knowledge across traditional boundaries by delivering general education in a coherent and coordinated fashion. Students will benefit by being provided a broad perspective that increases their breadth of knowledge beyond that found in a single general education course.

“In its cross-college collaboration, Plan One will significantly increase the likelihood of a formative undergraduate experience for our students,” notes Kitterle. “Our approach is in keeping with the national emphasis on improving undergraduate education and is consistent with NIU’s General Education Mission Statement, inasmuch as it provides increased opportunities for students to relate information from one intel-

lectual realm to another and to see connections and relationships among ideas.”

The approach also enables faculty to work together in developing their syllabi and coordinating course delivery so that connections and relationships among ideas are more readily articulated, notes Kitterle.

“From the faculty’s perspective, this thematic approach to general education provides a way of developing a learning community where teaching, scholarship, and research at interdisciplinary boundaries can influence and inform undergraduate education,” he says. “Moreover,” he adds, “such an approach can be the basis for curricular linkages at the upper division in electives or the major. It can be the means by which the values and value of general education can permeate and infuse the entire undergraduate experience. It is a way to create a uniquely Northern approach to undergraduate instruction.”

Made possible through funding from NIU’s Alumni Foundation and the Provost’s Office, and endorsed by the councils and curriculum committees of both colleges, Plan One was initiated with a General Education Transformation Workshop last year, an event in which selected faculty who teach general education courses worked collaboratively to develop the themes that would link some of the various courses in the general education curriculum.

Faculty members in different disciplines worked in three- or four-member teams to identify and effectively link their respective general education courses with the particular

themes. The summer program also featured presentations by invited scholars, which included in-depth discussions of issues, strategies, and resources for general education transformation through thematic linkages. Subsequent workshops have drawn more and more faculty and are now a continuing part of college planning.

The following are examples of courses linked to a Plan One cluster:

Beauty

ART 282	Introduction to Visual Arts
ART 395	19th-Century Art
PHIL 101	Introduction to Philosophy
PHIL 342	Philosophy of the Arts
PHYS 150	Physics

Courses in the beauty cluster develop an awareness of beauty in nature and in the arts; an understanding of scientific, social, and historical ideas about beauty; and the ability to think critically about the connections between beauty and a good life and to identify and explore important questions about beauty.

Civilization

ECON 260	Principles of Micro-economics
PHIL 231	Contemporary Moral Issues
THEA 203	Introduction to Theatre

Courses in the civilization cluster examine general issues concerning the structure of civilization, specific features of particular civilizations, and those activities that are hallmarks of civilized endeavor. An important goal of the cluster is to impart a sense of what citizenship means.

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Community

- COMS 240 Rhetoric of Interpersonal Communication
- ENGL 115 Masterpieces of British Literature
- ENGL 315 Shakespeare
- FLRU 261 Russian Culture and Literature
- PHIL 231 Contemporary Moral Issues
- SOCI 270 Social Problems

Courses in the community cluster address key questions about human community such as: What is a community? How do communities shape their members? How are communities held together or pulled apart? How will we define community in the future?

Science, Society, and Culture

- ANTH 120 Introductory Anthropology
- ANTH 210 General Prehistoric Archaeology
- ANTH 220 Cultural Anthropology
- BIOS 101 Plant Products and Human Affairs
- BIOS 103 General Biology
- GEOL 120 Introduction to Geology
- PHYS 150 Physics
- THEA 203 Introduction to Theatre

Courses in the science, society, and culture cluster examine the complex interactions between science, society, and culture. This cluster considers the influence science and technology have had on the growing human population and the physical environment, as well as the influence that society and culture have on the science that develops.

LA&S OFFERS NEW MULTIDISCIPLINARY INITIATIVE

Cognitive Studies Will Link Curriculum Across Departments

With four new hires and others planned, the College of Liberal Arts and Sciences has launched a new multidisciplinary initiative in cognitive studies. As a relatively new disciplinary field, cognitive studies draws from several established disciplines, including anthropology, psychology, computer science, linguistics, philosophy, and biology, notes Dean Frederick Kitterle.

“The field of cognitive studies varies in content at different institutions, focusing on one or more of the following areas: perception, learning, memory, knowledge, meaning, reasoning, language, attention, affect consciousness, and the control of action,” he says.

“It is a field that attempts to understand the structures and processes that make certain cognitive achievements possible—such as writing a play, planning a course of action, or learning a language. It assumes that these acts are the results of complex computations, and researchers in the field seek to understand the nature of these computations and the order in which they occur.”

Undergraduate courses and curricula in cognitive studies will emphasize the integrative, interdisciplinary nature of new research and the changes it has worked in our understanding of the mind and behavior, continues Kitterle. The new field reflects the College of Liberal Arts and Sciences’ emphasis on multidisciplinary teaching and research and will strengthen and facilitate collaboration among faculty and students, he adds.

“Our development of a cognitive studies emphasis was consistent with the desire of the college to provide undergraduate students with more opportunities to see how knowledge is interconnected, how the theories and approaches of different disciplines can converge to enhance our understanding of complex thought processes, and how students themselves could work with faculty to help discover and characterize those processes,” notes Kitterle. “It will occupy a significant place in the undergraduate experience and will be an important option for students.”

Kitterle, whose own academic discipline is psychology, says there are a number of potential benefits for students in cognitive studies.

“First, cognitive studies addresses some of the major questions of intellectual discourse: What is the nature of meaning? Are perception and knowledge objective? What is the relationship between mind and brain? What is consciousness? Such questions are central to undergraduate education, and they are of great interest to contemporary undergraduates. Cognitive studies’ empirical approach to these questions provides a bridge between science and areas of academic pursuit that have become increasingly distant from science.

“Second, cognitive studies can be a premier area of general science education where students can be exposed to philosophical questions about the human mind and the empirical, scientific approach to answering those questions,” says Kitterle. “In short, cognitive studies opens up a rich vein of discourse among people with very different views of science,” he says.

“Finally, cognitive studies is being applied in important areas of public policy and technology,” continues Kitterle. “Issues in human/computer interaction, workplace organization, reading remediation, mathematics education, cog-

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niton and aging, and the reliability of traumatic memories, are among the many being pursued by cognitive scientists. Increasingly, some familiarity with cognitive science will be a condition for informed citizenship.”

New hires in the Departments of Anthropology, Computer Science, Psychology, and English (linguistics) will likely be followed by new hires in other departments as well, says Kitterle. The expertise of the new faculty will reflect the intersecting interests of all the departments in exploring the interdisciplinary implications of cognitive science, he says.

“I am confident that our new hires will add to the strength of their respective departments and enhance the increasing multidisciplinary focus of the college’s curriculum,” he says. “We are encouraging them, as well as others we hope to hire, to develop a coordinated, coherent, and integrated curriculum and programs of research that involve undergraduate as well as graduate students,” he notes.

Kitterle also believes that the new initiative provides a unique opportunity at NIU for cross-college collaboration—for example with faculty members in the College of Engineering and Engineering Technology who are interested in speech recognition, or faculty members in the College of Health and Human Sciences who are interested in communicative disorders. Moreover, the linking of diverse expertise on major research issues provides increased opportunity for NIU to position itself for highly prestigious National Science Foundation Interdisciplinary Research Grants, he notes.

TWO NEW PRESIDENTIAL RESEARCH PROFESSORS NAMED FROM LA&S

Meserve and Dabrowski Honored for Outstanding Scholarship

Peter Meserve of the Department of Biological Sciences and Bogdan Dabrowski of the Department of Physics have been named Presidential Research Professors for 1999-2003.

The two professors began their terms July 1, 1999, and are the most recent of more than 40 college faculty to be honored with NIU Research or Teaching Professorships. The prestigious appointments are awarded to faculty members in recognition of their excellence in research, outstanding past accomplishments, current renown, and future potential in their respective fields. After their terms as Presidential Research Professors, Meserve and Dabrowski will retain the title of NIU Distinguished Research Professor.

“Faculty members who are named Presidential Research Professors exemplify what Northern Illinois University is all about,” says LA&S Dean Frederick Kitterle. “They are dedicated educators, consummate professionals, and passionate teachers and researchers who are renowned in their area of study. Peter and Bogdan certainly fit that description.”

Peter Meserve has been a member of NIU’s faculty since 1976. His research has concentrated on the population ecology of small mammals in North and South America. Since 1988 he has been the principal U.S. investigator at Fray Jorge, a 24,000-acre national park about 50 miles from the resort town of La Serena in Chile, where he has pioneered procedures for studying the



Peter Meserve

populations and interactions among small-mammal predators and their prey.

Meserve’s work in Fray Jorge was the first large-scale ecological experiment in temperate South America and has become the longest running field manipulation in the temperate neotropics. In addition to approximately 20 publications since 1993 in such prestigious international journals as *Ecology*, *Oecologia*, and *Oikos*, Meserve’s team has developed an important database for major ecological processes and phenomena such as predation, herbivory, and El Nino events in western South America.

Since receiving his B.A. in zoology from the University of California, Davis, his M.S. in zoology from the University of Nebraska, Lincoln, and his Ph.D. in biology from the University of California, Irvine, Meserve has published more than 50 scientific articles. Since 1983, his research has been supported by over \$1 million in grants from the U.S. National Science Foundation and its

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Chilean counterpart agency, FONDECYT, as well as the U.S. AID program. In addition, he received a Fulbright Research Scholar Fellowship in 1983-84, and two Organization of American States Research Fellowships in 1984 and 1989.

Meserve, who also has been a research associate at Chicago's Field Museum for 15 years, emphasizes "hands on experiences" in his classes, and has "always tried to integrate examples from my work in demonstrating the principles of ecology and biology." He believes that "I have been very fortunate in my academic choice of NIU, in that I have been able to teach courses in my strongest areas of research, including general ecology, as well as advanced courses and seminars in biogeography, community ecology, and the biology of birds and mammals. Therefore, it is easy for me to integrate concrete examples from my research in course materials."

Of his new appointment, Meserve says "I am humbled by this award and grateful to the university as well as fellow colleagues and administrators for the recognition that it brings. I have found a marvelous research and teaching environment here at NIU, which nurtured my interests and has enabled me to be so productive."

Bogdan Dabrowski, a native of Poland, came to NIU in 1990 as a research associate. He was promoted to associate professor four years later and to full professor in 1998. His research in high temperature superconductivity integrates chemistry, physics, and materials science and incorporates both theory and experiments. His broad-based research includes collaboration with Argonne National Laboratory, Northwestern University, and 30 other institutions.

Dabrowski's work has resulted in more than 190 publications in scientific journals, 50 presentations at professional conferences, and two U.S. patents for two new superconducting materials. In less than a decade, his research also has attracted more than \$3 million in support from the National Science Foundation, the Department of Energy, and the Office of Naval Research.

"In summary, my research program focuses on understanding the crystal chemistry of complex materials, specifically the relationship between structural and physical properties and the underlying thermodynamic parameters important for their synthesis and characterization," he notes. "I center my attention on selected materials that are important in electronics, transportation, energy storage, and information and telecommunication applications."

Since 1996, Dabrowski has been involved in a major endeavor—research on compounds of manganese and oxygen. He notes these materials display colossal changes of resistivity in magnetic fields and so can serve as very sensitive sensors of magnetic fields—for example, as reading heads in computer hard drives. But they must operate near room temperature.



Bogdan Dabrowski

"My efforts have focused on creating new synthesis routes for reliable formation of complex manganese oxides and establishing methods for measuring intrinsic and extrinsic properties separately," he explains. "The knowledge of microchemistry we obtained has helped establish a means to achieve the large magnetoresistive effect at room temperature needed for practical applications."

Dabrowski believes his work also has important applications in the education of his students. They assist in his research, are trained to operate the sophisticated equipment in NIU labs, and go on to conduct their own research and experiments, he notes.

"As a physicist heavily involved in teaching and research, I combine the two endeavors in my work with students in the classroom and laboratory. The blend of teaching and research occurs on several levels because my students and I are involved in a similar process of learning—learning what is already proven and described in the textbooks, and learning new knowledge by concept and experiment.

"During the learning process I have two main goals," continues Dabrowski. "First, I try to influence my students to acquire universal 'rules' of effective thinking and working that they will use throughout their lives. These rules consist of intellectual curiosity, the pursuit of knowledge, and persistence in searching for solutions to problems. I try to teach them to use reason, to be honest in work, and not to be afraid to make mistakes or admit them.

"Second, I make every effort to provide students with the timely information and skill that will be useful in their future careers in the rapidly evolving technological world. The

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state-of-the-art instrumentation in my laboratory allows for an extensive hands-on component of experimental science. My students use modern synthesis and characterization instruments coupled with sophisticated computation hardware and software.”

Noting that “cutting edge research is of great value at both the graduate and undergraduate levels,” Dabrowski believes that the extensive collaboration that occurs in his NIU laboratory also provides great intellectual growth for his students in their meaningful interaction with leading scientists from around the world. What that means, practically speaking, is that “the laboratory provides students not only with a firm grounding in physics education but also a firm basis for their career paths, whether they go into academic or industrial careers,” he says.

Dabrowski says that his appointment as a Presidential Research Professor will further allow him to continue his teaching goals and to focus on “the discovery of new phenomena.” At the same time, the honor “reinforces my conviction that hard work is indeed rewarded in the United States like nowhere else in the world, no matter your ethnicity.

“During my career at Northwestern, Argonne, and NIU, I was privileged to learn from several of the world’s most renowned researchers working in the field of inorganic oxide materials, and now I am equally privileged to carry on the task with my own students,” he says.

THREE NEW PRESIDENTIAL TEACHING PROFESSORSHIPS FOR LA&S

Mellard, Cooper, and Smith Latest College Faculty to be Honored

James Mellard of the Department of English, Martha Cooper of the Department of Communication, and Fred Smith of the Department of Anthropology are NIU Presidential Teaching Professors (PTP) for 1999 through 2003. NIU names three Presidential Teaching Professors annually, and the selection of the three LA&S faculty for the prestigious professorship represents a continuing honor, according to Dean Frederick Kitterle.

“We in the college are very proud of the continuing recognition of our faculty’s teaching excellence,” says Kitterle. “Such recognition has become a tradition in the college, and Jim, Martha, and Fred certainly reflect that excellence. These teaching awards are to faculty members who are also active scholars; our students are taught by people at the cutting edge of their disciplines who care very deeply about teaching as well.”

Presidential Teaching Professorships are the university’s highest teaching honor and include a \$5,000 per year stipend for four years to support activities directly related to the improvement of teaching. Each recipient also receives a \$2,000 base salary increase and one semester of released time to create additional course materials or develop new instructional methods.

Mellard, Cooper, and Smith, who began their terms July 1, 1999, will retain the title of NIU Distinguished Teaching Professor when their terms as Presidential Teaching Professors expire.



James Mellard

James Mellard has taught at NIU since 1967. He received his doctorate from the University of Texas, his M.A. from Oklahoma University, and his B.A. from Lamar University. A prolific scholar, he is the author of five books and the co-author of one; in addition, he has published 63 scholarly articles in professional journals. His areas of specialization include 20th-Century American Fiction; Prose Fiction/Rhetoric of Fiction; Critical Theory; Psychoanalytic (particularly Lacanian) Theory; and William Faulkner.

Mellard also has served in various administrative capacities in his 33 years at NIU. In the English department, he served as director of the freshman program, director of graduate studies, and chair. He also served as acting dean of LA&S, and was even interim athletic director for the university.

When asked about the relationship of his particular critical orientation, his research, and his teaching, Mellard replied: “The interesting thing for me as I think about my teaching and research is that the teaching often drives the research, not vice versa. For instance, I have first taught any number of works of

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fiction before I ever wrote on them, but in the teaching I came to understand how I could connect them to my psychoanalytic orientation.

“My readings of *The Scarlet Letter*, *The Beast in the Jungle*, and *To the Lighthouse*, which I developed in my book, *Using Lacan, Reading Fiction*, developed from texts I was teaching in non-psychoanalytic ways,” he continues. “In effect, for me it is more important to teach well and then to research, inasmuch as research lies in the writing of publishable essays and books that are typically generated first in the teaching.”

Heather Hardy, chair of the English department, says Mellard “epitomizes the well-rounded faculty member. He is a dedicated teacher, a distinguished scholar, and his service to the department, NIU, and the profession has been truly exceptional. Jim is known for putting a great deal of effort into his teaching and the improvement of his teaching. His students at all levels are especially grateful for the time and expertise he shares with them to help them develop their writing skills.”

It is certainly true that Mellard, who has directed more than 20 master’s theses and doctoral dissertations, is well known for the time he spends with students in developing their writing and research skills, but in more than 30 years of teaching he has come to believe that teaching is about more than just imparting skills.

“I want to be a good teacher, and I try to spend as much time as seems necessary for any given student,” he says. “But in general, I think my interest in psychoanalysis makes me more sensitive to the ‘human’ issues involved in teaching. I know, for instance, that some students, particularly in undergraduate classes, are still having problems with father-

figures or other figures of authority, so I try to be as responsive to their needs as I can.

“I would advise instructors in higher education not to forget that their students are important, have needs, have hopes and dreams, have priorities that run counter to our own, have stressful lives and probably not enough financial resources to make their educational experiences the genteel ones that we imagine from American myth, legend, film and folklore.”

Martha Cooper has been teaching at NIU for 16 years. She received her Ph.D. from the Pennsylvania State University, her M.A. from Northern Illinois University, and her B.A. from West Virginia Wesleyan College. Her research interests are in postmodern and feminist issues in contemporary rhetorical theory and criticism; communication ethics; and persuasion and public advocacy.

Cooper has authored one book, co-authored another, and published more than 20 essays, book chapters, encyclopedia articles, and reviews. Her first book, *Analyzing Public Discourse*, investigated how public communication (e.g., speeches, documentary films, popular books, political arguments, corporate advocacy, etc.) creates public knowledge and forges public opinion. Her second, *Power Persuasion: Moving an Ancient Art into the Media Age* (co-authored with William Nothstine), developed case studies of a broader range of persuasive messages from the advertising and public relations industries. In both books, she concentrated on the relationship among communications, knowledge, power, and ethics.

Her critical essays reflect a similar interest in public and persuasive discourse about controversial issues;



Martha Cooper

and, in addition to her general interest in rhetorical theory and criticism, she has developed a particular concern for the importance of communication in a postmodern world. For many years she has addressed a problem suggested by many postmodern writers—the loss of grounds for ethical or moral action and accountability that accompanies the postmodern loss of faith in universal values and norms.

“My research and teaching are symbiotic,” says Cooper. “I frequently translate my research into my classes, and I often use issues and problems encountered in class to spur my research. I also ask my students to read original works and to write reflective and critical papers regardless of whether they are studying theory or practice. Similarly, I encourage my students to engage in the larger contemporary intellectual conversation that exists alongside popular culture by integrating materials from a variety of the arts and communication technologies and raising questions that contemporary thinkers are asking.”

Of her teaching philosophy, Cooper says: “In contrast to a philosophy of education as training, I believe teaching is about giving people the

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confidence and tools to continue learning by and for themselves. I do not assume that everyone just learns naturally. Instead, I believe learning happens most easily when people have confidence that they can learn and understand a systematic approach for learning. The ground for teaching is the relationship between teacher and student, a relationship that ideally embodies both respect and care.

“My view of the ideal teacher/student relationship is important to my understanding of my role as a teacher,” she continues. “At the outset, I assume students are capable, worthy of respect, and deserving of compassion. I also think of them as relative newcomers to my area of expertise, as novices learning a craft rather than as clay to be molded or empty vessels to be filled by a powerful master.”

By assuming students’ own competence and bringing an attitude of respect for them to each class, Cooper works “to create an environment in which it is safe to try and to fail so that eventually students can succeed. As part of creating this environment, I attempt to create assignments and structure curricular units that are challenging but manageable, and I try to admit my own mistakes readily to the students when their fresh eyes spot ideas or tactics that escape my well worn vision.”

Fred Smith did his undergraduate work at the University of Tennessee and his M.S. and Ph.D. degrees from the University of Michigan. After teaching at the University of Tennessee, he came to Northern in 1990 as chairman of the Department of Anthropology and recently was elected to his fourth term.

Smith’s research focuses on morphology of Neanderthals, a type of archaic humans inhabiting Europe

and parts of western and central Asia between 300,000 and 34,000 years ago. Some researchers consider Neanderthals a distinct species that was pushed more and more towards peripheral areas and subsequently rendered extinct by some combination of diseases and competition with a distinct and superior species, the ancestors of early modern humans.

Smith disagrees with that view, and, using new direct radiocarbon dating on two fossils from a cave site in Vindija, Croatia, he and his international team of researchers determined that Neanderthals inhabited central Europe as recently as 28,000 years ago. Those findings suggest that Neanderthals and modern humans might have co-existed for several millennia and perhaps even mated, says Smith.

“While the dates in and of themselves don’t necessarily prove anything about the nature of the contact, they do suggest that Neanderthals existed 4000 to 5000 years more recently than previously believed, so the potential for population overlap and genetic exchange between Neanderthals and modern humans is enhanced,” he says. “I believe there probably was a good deal of contact and genetic exchange because there is evidence that late Neanderthals

were developing modern features, while the anatomy of early modern Europeans also reveals a number of features that are hard to explain unless you grant Neanderthals some ancestral status,” he notes.

Moreover, continues Smith, ancient tools unearthed at the Vindija cave site, certainly suggest strong interaction between Neanderthals and early modern humans. Neanderthals are commonly associated with relatively crude stone tools, while early modern humans made more sophisticated stone and bone tools.

“The Vindija site produced both kinds of tools, including a beveled bone probably used as the tip of a spear,” notes Smith. “It’s likely that Neanderthals developed all these tools or got the bone tools through trade with moderns,” he adds.

Smith, who also is an NIU Distinguished Research Professor, believes that teaching and research are fundamentally part of the same endeavor.

“Research is not worth very much if it’s not shared, and shared in a broad context,” he says. “So I see my job as an educator on two levels. The first is to educate students, including undergraduate general education students, and the public in general.

Those of us who are privileged enough to have a research position have the duty to share that information with as broad a public as we can.

“The second level is to have students get interested in what I do, become colleagues, and advance in their own more specialized and professional ways. I’ve been very fortunate here at NIU. I’ve had 10 master’s students and all of them have gone on to prestigious Ph.D. programs and professional careers. My own research has benefitted tremendously from involving graduate



Fred Smith

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students and advanced undergraduates in projects, and many of my publications have been co-authored with students who have worked with me in field work in Croatia, Austria, and Germany.”

The best way one can teach is to convince others of your own excitement and involvement in a particular field, advises Smith. “When students can see that their professor is excited, it carries over to them,” he says. “The one thing that makes a university a university—and NIU is very strong in this regard—is that students learn from people who are doing the primary research and who are actively involved in teaching the results of their research.”

Presidential Teaching Professorships

Candidates for the professorship must be full professors who have taught at NIU for at least six years.

Other qualifications include

- *demonstrating extraordinary commitment to students and their welfare*
- *commanding respect and esteem from students while inspiring the best in them*
- *instilling in students an intense interest in their academic disciplines*
- *applying rigorous standards to student performance*
- *exploring and developing new instructional methods and technologies*

TWO LA&S FACULTY MEMBERS RECOGNIZED FOR EXCELLENCE IN UNDERGRADUATE TEACHING

NIU Honors Grubb and Lin for Exemplary Teaching

Daniel Grubb of the Department of Mathematical Sciences and Chhiu-Tsu Lin of the Department of Chemistry and Biochemistry were each awarded NIU’s Excellence in Undergraduate Teaching award for 1999-2000. The award is the university’s oldest and is primarily based upon student opinion and appraisal.

Grubb and Lin won the prestigious honor by first being nominated by students and chosen as their respective department’s nominee by a student advisory board. The board then submitted their names and supporting information, including letters from current and former students, to a college student review board, which chose nominations from across the university to be submitted to NIU’s Committee for the Improvement of Undergraduate Education (CIUE). The CIUE, a committee of faculty and students, then chose Grubb and Lin as two of the three university recipients.

Daniel Grubb, who received three degrees from Kansas State University and has been at Northern since 1986, jokingly notes that he “dropped out of high school and dropped into college.”

Grubb started an accelerated math program in seventh grade, went to a community college, and, under the guidance of a mentoring faculty member, moved from beginning algebra to calculus in one year. He then took the calculus sequence, and by the time he was fifteen he was doing graduate level work in mathematics.

As a 15-year-old high school student he successfully completed a



Daniel Grubb

long-distance course offered by Kansas State University for high school seniors. Realizing his abilities in mathematics, KSU administrators brought him to the university, interviewed him, and decided they wanted him in their program. They waived the requirement of a high school diploma and he went directly into college, where he subsequently received his high school equivalency diploma as a college sophomore.

“I guess, strictly speaking, I was a high school dropout,” he says.

Grubb teaches across the entire spectrum of graduate and undergraduate courses at NIU, but he says he particularly likes teaching calculus and trigonometry to undergraduates.

“I really enjoy teaching the calc and trig sequences,” he says. “There are really some very fundamental ideas that changed the way we view the world around us—you know, the ideas that Newton came up with.”

“The way our view of the universe changed with Newton is partly because of the mathematics he created, which allowed very difficult problems to be solved relatively easily, so much so that now they are first or second year undergraduate material,”

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notes Grubb. “That’s what I try to show my students—that calculus is the mathematical description of how things change, as well as the general rules for analyzing change. So, for example, ‘differentiation’ specifically talks about rates of change, and, given a rate of change, ‘integration’ is how you get back to the original.”

Grubb believes that the “math phobia” purportedly suffered by many people can be overcome if teachers would only focus on the elegance of mathematics and the creative insights many students can bring to the study of math.

“I think the reason a lot of people have this so-called math phobia is because they have had teachers who weren’t very comfortable with the material themselves,” he notes. “And if you have teachers who aren’t very comfortable with math, they are likely to stress that there is just one right way of doing things. And then, students who are even somewhat creative—and perhaps intuitively understand things better than their teacher—can see other ways of doing things and, therefore, get frustrated.

“One of the aspects of knowing the subject thoroughly—and the way I approach teaching is to first understand the material as thoroughly as I can—is realizing that there can be more than one way of doing any particular type of problem and, recognizing that, encouraging insights on the part of students. In the end, there *is* going to be a right answer; but the way of getting to that answer can change, and insight can drastically reduce the amount of work and frustration you need to get to the answer.”

William Blair, chair of the mathematical sciences department, says that “probably the single word that describes Dan’s teaching is enthusiasm.” Indeed, Grubb believes it’s enthusiasm that reveals the beauty of

math while stripping it of its imposing aura. “I’m just excited about the subject matter, and I find that excitement is communicated to the students,” he says. “I don’t want math to be a mystery. I want to show students the beauty of it, and that’s what I try to do. I love the experience of seeing somebody who has not understood something finally get the idea. Their eyes light up.”



Chhiu-Tsu (C.T.) Lin

Chhiu-Tsu (C.T.) Lin has been a faculty member at NIU since 1985, having received his B.S. degree from Tamkang University, Taiwan; his M.S. degree from Brock University, Ontario, Canada; and his Ph.D. degree from UCLA. He teaches undergraduate courses in general, physical, and research chemistry.

“C.T. really is concerned about his students, so he does put a lot of effort into teaching and making sure the students understand,” says James Erman, chair of the chemistry and biochemistry department. “His award is even more noteworthy because he teaches in some of the harder areas of chemistry.”

Lin, who has received three patents, and is the author of 120 scientific publications and more than 80

papers at conferences, symposia, and workshops, has also garnered about \$1 million in external support for research activities. He recently developed his own “spin-off company”—ChemNova Technologies—which promises a unique opportunity for more research and development funds. Lin believes that such external research activities are fundamentally inseparable from his teaching responsibilities as an NIU professor.

“Teaching, improving undergraduate and graduate education, and supervising my students and post-doctoral associates are my personal passion,” he says, noting that “my own extensive research activities dovetail closely with the success of my teaching. My research results provide new knowledge, offer materials for updating and expanding lecture notes, and help prepare a new group of well-trained students and research associates for industrial and academic employment.”

Like Grubb, Lin believes that “the very first step towards successful teaching is to become interested in it,” and “a great teacher is the one who can connect with students and help them learn to love learning.” Care is what leads one to become a great teacher, he says.

“A great teacher cares about ‘what to teach’ by preparing, organizing, and updating the course content. A great teacher cares about ‘how to teach’ by using concrete examples, demonstrations, audio/video technology, and other interactive devices and methods. Most importantly, a great teacher cares about students’ development by constantly monitoring their progress.

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“The students who excel in class should be encouraged and those who have difficulty should receive the extra help,” continues Lin. “A great teacher also cares about self-evaluation and students’ evaluation,” he adds, noting that “constructive criticism forms the basis for improving courses and providing new challenges for connecting with students.”

Lin, who is well known for his personal and novel ways of motivating students (he often uses the analogy of a warming hug on a wintry day, for example, to begin a lesson on heat transfer), says “I motivate my students to become interested in chemistry by relating each chemical principle to a real life event that can be seen in their daily lives.

“I try to make students realize that enrolling in a chemistry class is not just to satisfy the course requirement, but to learn to enjoy the study of matter around us,” he continues. “I motivate my students to become skillful in chemistry by repeatedly solving interesting chemical problems. In chemistry, we applaud someone who is a good problem solver, instead of one who simply watches things happen.”

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