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Annual Report 1989-1990

Ogden College
of Science Technology and Health

Western Kentucky University

October 1990
August 15, 1990

Dear All,

This annual report is a new venture for our college. Its purpose is to bring you news of what's going on in Ogden and to help forge, for all of us, a more complete picture of Ogden College and all of its many dimensions. Each year we plan to bring you a summary report like this one on outstanding students, faculty, alumni; on important changes in our facilities and programs and on our aspirations for the future.

Our alumni, employers of our students and our other friends are obviously very important to us. You provide both material and moral support, and you serve as important sources of information for prospective students. Our alumni and employers of our graduates stand as the best testimony to the quality of our programs. We recognize that it is our responsibility to keep you informed about Ogden College. We hope that this report also becomes a stimulus for enhanced two-way communication.

This issue is a test issue being sent to only a sample of our alumni and friends. We are counting on you to let us know how we might make future editions better. We look forward to hearing from you.

Sincerely,

Charles E. Kupchella, Dean

Ogden College of Science, Technology and Health
Ogden College attracts many outstanding students. From 1983 to 1988, Ogden students as a group have the highest composite ACT scores of any of the colleges at Western. Not surprisingly Ogden students also have the highest group grade point average consistently over the past five years. Ogden students distinguish themselves not only in the classroom but also in athletics and in other extracurricular activities.

STUDENT PROFILES

MARTY COLEY, OUTSTANDING DAIRY STUDENT

Marty Coley, a December, 1989 graduate from WKU’s Department of Agriculture and a resident of Lafayette, Tennessee, has been selected as the winner of the Dairy Shrine Student Recognition Contest which symbolizes the nation’s outstanding university student in dairy science. The purpose of the award is "to encourage graduating seniors to work with dairy cattle after they complete their college education."

Nominated by WKU Associate Professor of Agriculture, Dr. Jodie Pennington, Coley has impressive credentials. While commuting some fifty miles daily to Western Kentucky University, he achieved a 3.67 GPA and was active in numerous student and other organizations. He has impressive oral communication skills which he honed considerably while serving as a Tennessee state FFA Officer. Equally impressive, while in college, he and his wife borrowed the funds to purchase a dairy farm and 135 dairy cattle. With his superb management skills, he has essentially paid off this debt. In addition to his careful record keeping.
Michelle also is working toward a Master's degree in Computer Science at Johns Hopkins University, with a concentration in software engineering. In a recent letter, she stated: "I feel that my undergraduate education at Western Kentucky University has made many of these good fortunes possible, and has set a firm foundation for any challenge in the future."

Michelle met her husband-to-be during one of her early co-op tours. They were married in the summer of 1989 and have purchased their first home in Pasadena, Maryland. Vacations so far have included skiing in Utah and swimming in Hawaii, not bad for a "fresh" Computer Science graduate!

HEALTH AND SAFETY STUDENTS CO-OP AT BARREN RIVER DISTRICT HEALTH DEPARTMENT

Health Education, Public Health and Health Care Administration are a few of the academic areas in which students are employed through the cooperative education program at the Barren River District Health Department. This past year five students, Holly Horlander, Kimberly Lynn Miller, Cara Cave, Stacy Shive and Joseph O. Bean, worked in various capacities at the Warren County BRDHD site.

STUDENT NOTES

AGRICULTURE: Susan Pfansiel, Susan Flanigan, Tom Zoretic, and Holly Warren were members of the WKU Riding Team that won the 1990 National Riding Team Championship held in Canton, New York. This team is apparently the first Intercollegiate Team at WKU to win a national championship. Susan Pfansiel was the National champion individual rider in Stock seat competition. She received a
silver saddle valued at $1,000 for her first place award. Greg Blaydes was selected as one of the top three senior animal science majors in the nation by the National Block and Bridle organization. Greg also received the Smith T. Powell Award, given by the Kentucky Beef Cattle Association designating him as the top animal science student in Kentucky with an interest in beef cattle. ALLIED HEALTH: Susan Hughes and Barbara Sprague, students in our Program of Healthcare Information Systems, each received a $500.00 scholarship from Lanier Voice Products. Ms. Cheryl Obermiller was the first recipient of the Kentucky Dental Hygienists' Association scholarship. Ms. Kerrie Burgess was the recipient of the Warner-Lambert/American Dental Hygienists' Association scholarship.

BIOLOGY: Charlotte Gill, a Recombinant Genetics major from Allensville, KY, presided as President of the 1990 regional convention of Beta Beta Beta in Baltimore, MD. Region II of the national biology honor society includes chapters in Alabama, Georgia, Kentucky, Louisiana, Mississippi and Tennessee. Ms. Gill will begin medical school at the University of Kentucky in the fall semester, 1990. Twenty seven seniors from the Department of Biology will continue their education in postgraduate studies in medical, dental, optometry, medical technology and graduate schools in the fall semester, 1990. In addition to institutions within the state, other schools to be attended include Indiana University, University of Alabama at Birmingham, Vanderbilt University and Yale University. Teresa R. Leibfreid, a Biology major from Bowling Green, KY, was awarded the Young Botanist Recognition Award by the Botanical Society of America. This national award was for excellence and outstanding promise as a contributor to the advancement of knowledge in the botanical sciences. Ms. Leibfreid was also awarded Outstanding Biology Graduate, 1990. She will attend graduate school at Indiana University in the fall, 1990. Toni Cottongim, a Biology major from Beechmont, KY, was awarded the L. Y. Lancaster Award for Excellence. This award is given each year to the outstanding senior in the pre-medical program. Ms. Cottongim will begin medical school this fall at the University of Louisville.

CHEMISTRY: The "Outstanding Major" award went to Susan Morales in 1989 and to Robert Forsythe in 1990. The "American Institute of Chemistry Senior Award" went to Todd Quinton in 1989 and Richard Tibblits in 1990. Fourteen graduates of the Department of Chemistry continued their education in medical and graduate schools in 1989-90. In addition to institutions within the state, students attended Miami University of Ohio and the University of Pittsburgh. Michelle Whiteley had her paper "A Study of the Flammability of Chlorinated Polyethylene Under Pyrolysis Conditions" chosen as one of the top five submitted to the North American Thermal Analysis Society. She presented the paper in San Diego. Roland Hoffman also presented a paper at the NATAS conference in San Diego. Ten chemistry students presented papers at the 75th Annual Kentucky Academy of Science meeting in Lexington, KY. They were Liria Morrell, David Garst, Susan Bosch, Laura Hayes, Robert Beauvais,
Matthew Perkins, Keith Bradfield, Roland Hoffman, Scott Gilleland, and Richard Tibbitts. Fourteen students presented papers at the 19th Annual WKU Sigma Xi Research Conference in Bowling Green. Mark Risen was awarded first and Matt Perkins second place in the undergraduate division. Leonor Lopez-Froedge was awarded third place in the graduate division.

**COMPUTER SCIENCE:** Steven Hoffman received the Outstanding Cooperative Education Student award for 1989, after working for BellSouth Services for two summers. John Ternent was awarded a $500 Upsilon Pi Epsilon scholarship. Western Kentucky University has the first chapter in the Commonwealth of this national Computer Science honorary fraternity. The first Computer Science Student Advisory Board (CSSAB) was formed, consisting of twelve active
Paul Campbell at Hardin Planetarium

students from all parts of the program. Their charter is to help point out problems in the Department, recommend solutions, and help implement them. ENGINEERING TECHNOLOGY: Senior Awards for academic excellence were awarded to Chris Hale in Civil Engineering Technology, Stephen Yates in Electrical Engineering Technology, and Glenn Johnson in Mechanical Engineering Technology. Students majoring in Civil Engineering Technology have requested a charter for a Student Club of the American Society of Civil Engineers. Dr. Currin has offered to serve as advisor to the club. GEOGRAPHY AND GEOLOGY: Mr. James H. Smith, Graduate Student - M.S. in Geography, was recently named as a Fellow of the Explorers Club. Less than 10% of the total membership of the prestigious society have been so honored. Mr. Britton Dotson, Graduate Student - M.

Daniel Duffy, Brian Combs, Shane Arnold, and Melissa Smith in Dr. Richard Hackney's Lab
S. in Geography - co-authored four publications during 1989. Britton's collaborators include Dr. Crawford and Dr. Kuehn. INDUSTRIAL TECHNOLOGY: Shannon Bowen received the L. T. Smith award as the outstanding student in Industrial Education for 1989-90 and Chris Griggs received the award for academic excellence in Industrial Technology for 1989-90. MATHEMATICS: The Kentucky Beta Chapter of Pi Mu Epsilon, an honorary mathematical fraternity, initiated thirteen new members at the annual spring banquets in 1989 and 1990. Bruce Kessler and Dawn Chumley were chapter presidents. Four mathematics majors, Stacy Criss, Karen Marie Johnson, Beth Mayer and Sarah Westerdale, were initiated into Phi Kappa Phi National Honor Society at the annual banquet in the spring of '90. Seventy-three mathematics majors received freshman scholarships, upperclass scholarships or math/science incentive loans during 1989. NURSING: Mary Baxter, a student in the Associate Degree Nursing Program, received a $250 scholarship in February 1989 from the Louisville Area Nurse Recruiters at the Kentucky Association of Nursing Students state convention. Kimberly Elliott, a senior in the Baccalaureate Degree Nursing Program and 1989 graduate of the Associate Degree Nursing Program, spent two weeks in June in Brazil with a medical team. This project was a clinic sponsored by the Kentucky Baptist partnership with Brazil. PHYSICS AND ASTRONOMY: At the annual Kentucky Academy of Science meeting, in Lexington, papers were presented by Mark DeWeese, Jeff Travelstead, Kevin Hargrave, Brian Combs, Daniel Duffy, and Melissa Smith. The Sigma Xi Undergraduate Research winner this year was Melissa Smith of Physics and Astronomy who presented a paper on "Optimum Reduction of All-Sky Ultraviolet, Blue and Visible Photometry." Eight other papers were presented by Physics majors at this conference. More than half of the graduating seniors in Physics and Astronomy went on to graduate school with assistantships. James Blatchford was awarded the George V. Page Award for being the graduating Physics senior with the highest GPA. Warren Grice was a close runner-up (within 0.01 points) and was given a special award. Both students had GPAs in excess of 3.96.
By any measure Ogden College has an outstanding faculty. In calendar 1989, the 200 Ogden faculty offered nearly 2000 course sections - literally hundreds of different courses on and off campus. The department of Geography and Geology, alone, offered some 170 course sections in the fall and spring of 1989, serving more than 4000 students. Teaching was only a part of the story. Ogden faculty also published more than 140 articles and books, made 250 presentations at professional meetings, filed 86 grant applications, attended 250+ workshops and short courses, made more than 100 visits to the high schools, served on 400+ committees - the Nursing faculty, alone, served on 77 external committees, commissions and boards, directed the research of dozens of students - presented twenty-three papers, and served as officers in dozens of professional organization.

FACULTY PROFILES

AGRICULTURE DEPARTMENT
HEAD NAMED C.A.S.E.
PROFESSOR OF THE YEAR IN
KENTUCKY

The head of Western Kentucky University's Agriculture Department, Dr. Luther B. Hughes, was named "Kentucky Professor of the Year" for 1989 by the Council for the Advancement and Support of Education (C.A.S.E.). Dr. Hughes, a native of Cadiz, Kentucky, has been head of the Department of Agriculture.
since 1983. Dr. Hughes was selected from some 518 candidates by a panel of 35 representatives of C.A.S.E. All candidates were reviewed on their accomplishments as teachers and all-around professionals. Hughes, a past-president of the American Association of State Colleges of Agriculture and Renewable Resources, graduated from WKU in 1966. He received his masters' and doctoral degrees from Purdue University with a specialty in soil microbiology and biochemistry.

**DR. JAMES WORTHINGTON**
**PRESIDENT OF NORTH CENTRAL WEED SCIENCE SOCIETY**

Dr. James P. Worthington, Professor of Agronomy in the Department of Agriculture, served as President of the North Central Weed Science Society during 1989. The NCWSS is one of four regional societies and encompasses 14 states in the U. S. plus four Canadian provinces. It has a membership of approximately 900 weed scientists from universities, federal and state agencies and industry.

Dr. Worthington represented the society in Washington D.C. in September along with the principal officers of the other regional weed science societies and the Weed Science Society of America in meetings with representatives of EPA, USDA and Congress. Position papers were presented to express the concerns of weed science on topics such as food safety, water quality, sustainable agriculture, minor crops, competitive grants, endangered species and herbicide resistant weeds.

Dr. Worthington has been very active in the society since 1971 and has served as committee chair of resident education, graduate student paper contest, resolutions and necrology, constitution and operating procedures, program, distinguished service awards, site selection and publicity and public relations.

Dr. Worthington came to Western Kentucky University in 1971 after receiving his Ph.D. from Ohio State University. He has received many grants from agricultural chemical companies in each of the last several years.

**WKU PROFESSOR AND STUDENTS TURN STRIP MINES INTO AVIARIES**

With increasing interest in ecology at the state and national levels, more people are concerned with the ecological problem of strip mining and its impact on the environment. Dr. Blaine Ferrell, professor of biology at Western Kentucky University, and a group of six students from the campus chapter of Beta Beta Beta, national honorary biological society, have one solution to the problem.

Dr. Ferrell and students have placed 50 nesting boxes for tree swallows on land owned by the Peabody Coal Company in Ohio County. The company gave permission for the project based on reclamation of the land and Dr. Ferrell's desire to halt the decline of tree swallows in Kentucky. Initial experiments involved placing half of the boxes over water and half over land.
Ninety percent of the nests over water were occupied while only 10% of the nests over land were used. The nest boxes produced over 100 young birds but, in addition, a second clutch of eggs were laid by some of the swallows. Dr. Ferrell indicates that the production of a second clutch in one season is unusual for this species.

**PHYSICS PROFESSOR PATENTS PUMP**

Professor William Buckman of the Department of Physics and Astronomy was awarded a U. S. patent for a new well pumping device that uses pressurized gas and relies on the unique application of several physical principles. The United States Department of Commerce ranked this invention in the top 5% and intends to fund its future development.

Dr. Buckman started his research on this pumping system four years ago. It will primarily be used to pump oil from shallow oil wells and water from bore holes. The capital costs and the maintenance costs are considerably less than for conventional systems, especially when compared to the most used jack pump system. With about 500,000 stripper oil wells in the United States alone and with the demand for special pumps for groundwater cleanup, the potential market for this pumping system is enormous.

This invention consists of a pump tank located in the bore hole, two hollow tubes extending from the pump tank to the top of the bore hole, a sensor to detect the liquid level, and a solid state controller. The pump tank is typically 15 feet long and three inches in diameter and for shallow wells, the pump tank is made of plastic. Two plastic tubes extend from the pump tank to the top of the bore hole. A solid state sensor and a controller enables the system to pump only on demand. By applying a low gas pressure, a short slug of liquid is pumped to the top of the bore hole during each pumping cycle.

Using pressures of 100 pounds per square inch, one can easily pump a well that is 1,000 feet deep, Buckman says, adding: "Obviously, this system can also be used to pump oil or water from gas wells which enable the gas wells to produce more gas. This system can also be used to pump sandy wells which usually choke up most pumping systems," he said.

The Department of Energy has invited Dr. Buckman to a workshop in which several nationally recognized consultants will advise him and the Department of Energy on the best plans to take this invention to the national market.

Buddy Steen, Engineering Technology and Professor William Buckman, Physics and Astronomy
Dr. Nicholas Crawford, Geography and Geology

**DR. NICHOLAS CRAWFORD RECEIVES NATIONAL AWARD**

Dr. Nicholas Crawford recently received the Silver Seal Award presented by the National Council of Garden Clubs. This was one of three awards presented by the National Council for outstanding concern for the environment during their annual meeting in Seattle, Washington. Specifically, Dr. Crawford was praised for his outstanding work as a teacher, explorer, environmentalist and concerned citizen.

Dr. Crawford joined the Department of Geography and Geology in 1976. Soon after his arrival he created the Center for Cave and Karst Studies and implemented the highly successful Summer Program at Mammoth Cave. Both these programs have international reputations. A prolific scholar, Dr. Crawford's research and publications have dealt primarily with groundwater contamination of carbonate aquifers, sinkhole flooding, and sinkhole collapse.

Dr. Crawford's most meaningful research resulted when he led the 1983 investigation in Bowling Green into the toxic and explosive fumes that had entered into approximately 50 homes and two schools. Through Dr. Crawford's expertise and leadership, funding to investigate and alleviate the problem was received from the Environmental Protection Agency Super Fund. The sources of the toxic and explosive fumes were isolated after considerable research and the problem was alleviated. In recognition of Dr. Crawford's contribution and dedication to solve the problem, the Faculty Senate of the University publicly commended him for his work. In 1985 Dr. Crawford was further honored by being selected as the University Research faculty member of the year.

Dr. Crawford's involvement of his students in his research, his concern for solving the immediate environmental problems of this region of Kentucky, and his inspirational teaching provide a perfect example of the excellent quality of instruction provided in the Ogden College of Science, Technology and Health.

**FACULTY NOTES**

**AGRICULTURE:** Dr. David Coffey was appointed by the U.S. Department of Education to the National FFA Board of Directors. He is the only U.S. university faculty member to be appointed. Dr. Jodie Pennington received an additional grant in 1989 from Monsanto, Inc. bringing his total three year grant for research on bovine somatotropin to over $300,000.

**ALLIED HEALTH:** Dr. Edwin T. Parks, Associate Professor, Program of Dental Hygiene, presented "Errors Generated Utilizing Rectangular Collimation" at the annual meeting of the American Academy of Dental Radiology in Honolulu, Hawaii, October 1989. Ms. Rebecca G. Tabor, Associate Professor, Program of Dental Hygiene, presented, "An Introduction to Photography in the Dental Office", at the International Symposium on Dental Hygiene held in Ottawa, Canada, June 1989. Dr. Ruby
Dr. Jodie Pennington, Agriculture

Meador presented "Degree Completion - Strategies for Survival", and "Assessing Outcomes in Clinical Programs", at the annual meeting of the American Association of Dental Schools, San Francisco, California, March 1989. Ms. Karen Sansom, Director, Program Healthcare Information Systems, serves as Vice President of the Kentucky Medical Record Association and as Editor of the Association’s Newsletter.

BIOLOGY: Dr. Blaine Ferrell, Professor of Biology, was named L. Y. Lancaster Professor. Dr. Ferrell was named to the professorship because of his interest in teaching premedical students and involving them in undergraduate research. The professorship was established by matching funds from the Ogden Foundation and the L. Y. Lancaster Memorial Lectureship Society. Dr. Joe E. Winstead, Professor of Biology, was elected President of the Association of Southeastern Biologists to serve in 1989-90. Dr. Winstead has also been named to a new three-year term as a Botanical Editorial Consultant for BIOSIS, the world’s largest biological and biomedical database corporation. The J. Cramer Publishing Company of Berlin-Stuttgart in West Germany has just released the 1989 edition of Bibliotheca Phycologica entitled "Freshwater Algae of the Southeastern United States" by Dr. Gary E. Dillard, Professor of Biology at Western Kentucky University. This edition contains Volumes I and II. A third volume in the set is presently being completed by Dr. Dillard.

CHEMISTRY: Dr. Earl Pearson, Professor of Chemistry, spent the summer doing research at Redstone Arsenal in Huntsville, Alabama. The
program was funded by Battelle Research Institute. **COMPUTER SCIENCE:** Dr. Darleen Pigford and Dr. Greg Baur co-authored *Expert Systems for Business: Concepts and Dr. John Russell completed a study for the City of Bowling Green entitled "Waste Management Issues in Bowling Green". Mr. Robert Baxter obtained a gift of $45,000.00 worth of computer equipment from Matthews Conveyor Division of Babcock Industries. **GEOGRAPHY AND GEOLOGY:** Dr. C. Ronald Seeger, Professor of Geography and Geology, presented a paper entitled "Cryptoexplosion Structures in the United States" at the 28th International Geological Congress in Washington, D.C. Dr. Noland Fields, Professor of Geography and Geology, serves on the Governors Earthquake Advisory Committee. Dr. Kenneth Kuehn, Associate Professor of Geography and Geology, with the cooperation of TVA, EPA, and state government obtained surplus equipment a high-gradient magnetic separator. This equipment is valued at $265,000. Dr. Kuehn also served as Editor of the *Journal of Coal Quality*. Dr. Albert Petersen, Professor of Geography and Geology, received a grant of $13,000 from the National Geographic Society to conduct a Geography Workshop for Teachers during the summer of 1989. **HEALTH AND SAFETY:** Dr. Ray Biggerstaff was recently appointed to the Kentucky Health Coordination Council. The Applications, published by Boyd and Fraser, the first commercial text authored in our young Computer Science department. Mrs. Carol Wilson received a two-year $20,000 Commonwealth Department of Education grant to form a Computer Science Alliance in the region served by WKU. Dr. Robert Crawford was editor-in-chief of the Turbo Users Group TUGLINES during his 1989-90 sabbatical in Washington State. Dr. Tom Cheatham received a NASA Summer Faculty Fellowship Grant to study object-oriented software testing at the Jet Propulsion Laboratory in Pasadena, California in 1989 and 1990. **ENGINEERING TECHNOLOGY:** Mr. Robert Baxter and Mr. William Moore have completed a computer program for computer aided instruction of Oscilloscope Theory and Operation. Dr. Thomas Currin and
The council has been responsible for developing the State Health Plan for the Commonwealth. Dr. Biggerstaff also recently contributed a chapter to a published text in *Community Organization*. The title of his chapter was "Leadership Development, Styles and Applications". Dr. Biggerstaff also had articles published in the *Kentucky Sanitarians and Fieldman Journal*, *Hospital Topics*, and the *Southern Health Association Journal* and two articles published in the *Compendium of Recent and On-going Research in Rural Health*. Dr. Henry Baughman and Mr. George Niva had their book, *First Aid for Injuries and Illness* published by Kendall-Hunt.

**INDUSTRIAL TECHNOLOGY:** Dr. Donald D. Wendt, Professor of Industrial Technology, was chosen as President-Elect of the Kentucky Industrial Education Association (KIEA) at the annual conference in Louisville, KY, in November, 1989. KIEA was organized in 1956 to serve the faculty and students of industrial, business and health programs at institutions of higher education, vocational-technical schools and high schools across the state. Dr. Wendt will become President of the organization in November, 1990. Dr. Kenneth Mussnug, Associate Professor of Industrial Technology, was appointed Director of the Center for Industry and Technology in 1988. The Center was established to assist business and industry in this region by providing a point of contact at Western for securing training and technical assistance. Dr. Edward C. Hein retired from the faculty of the Industrial Technology Department at the close of the 1990 spring semester. Dr. Hein had taught automobile mechanics, fluid power mechanics, and drafting since coming to Western in 1972.

**MATHEMATICS:** Dr. James B. Barksdale, Jr., Professor of Mathematics, was named to the Panel of Visiting Lecturers of the Mathematical Association of America. Dr. Kyle Wallace, Professor of Mathematics, completed a four year term as Governor of the Kentucky Section of the Mathematical Association of America. The 1990 summer mathematics graduate course for community and junior college teachers entitled Complex Variables, was taught by Dr. Carroll Wells, Professor of Mathematics. Dr. Wells has taught a course for these teachers each summer since 1977.

Dr. Barry Brunson, Associate Professor of

**Susan Jones, Nursing**

**Dr. Doug Humphrey, Physics and Astronomy**
Dr. Thomas Coohill, Physics and Astronomy

Mathematics, served as president of the WKU Club of Sigma Xi, the Scientific Research Society. Pat Hooper, Assistant Professor of Mathematics, and Linda Pulsinelli, Assistant Professor of Mathematics, have completed work on Essential Mathematics and the third editions of Introductory Algebra and Intermediate Algebra for Macmillan Publishing Co. At the joint American Mathematical Society/Mathematical Association of America meeting in Phoenix, Arizona in January 1989, Dr. Bettina Richmond, Assistant Professor of Mathematics, presented "Freeness of infinite dimensional Hopf algebras of Hopf subalgebras" and Dr. Tom Richmond, Assistant Professor of Mathematics, presented "On the Wallman Ordered Compactification." NURSING: Susan Jones, Associate Professor of Nursing, received the college Outstanding Teaching Award in 1988. She was appointed by Governor Wilkinson to the Kentucky Board of Nursing and during 1989-90 served as Chair of the Education Committee. Dr. Virginia Trotter Betts, was the 1989-90 HCA Greenview Visiting Professor in Nursing. Dr. Betts is a Senior Fellow in the Vanderbilt Institute for Public Policy Studies, Associate Professor of Psychiatric-Mental Health Nursing at Vanderbilt University School of Nursing and first Vice-President of the American Nurses Association. Kay Carr, Associate Professor of Nursing, completed requirements for the Ed.D. in August, 1989 at Vanderbilt University George Peabody College. Nancy Rascoe, Assistant Professor of Nursing, was recipient of the Kentucky League for Nursing "Nurse Educator of the Year Award". The award was presented at the annual meeting March 31, 1989. The award is given in recognition of distinguished teaching ability, persistent support of quality changes in nursing education, serving as a strong student advocate and innovative and creative teaching. PHYSICS AND ASTRONOMY: Dr. Robert Hall conducted a summer workshop entitled "Science/Math Reasoning and Problem Solving" for high school teachers, funded through state Title II. Dr. Douglas Humphrey has been funded by Kentucky EPSCoR to conduct research here and in Canada on "Multi-Step Processes in Pion Absorption." Dr. Wieb Van der Meer has been funded by Kentucky EPSCoR as a Visiting Scholar in Membrane Biophysics and also by the American Heart Association for a similar project. The faculty of Physics and Astronomy
Dr. Gordon Jones, Agriculture

Dr. Gordon Jones has published over fifteen articles in national/international journals, a rate which averages above one per full time faculty. Dr. Marvin Russell is involved in the Physical Activities for Learning Science program through the University of Huntsville in Alabama. Dr. Thomas P. Coohill has been appointed as U.S. Representative to the International Scientific Committee on Problems of the Environment. Dr. Coohill was also appointed "Queen's Reader" for Ph.D. theses in Biophysics for Australian Universities. Dr. Richard Hackney is a consultant to NASA on the International Ultraviolet Explorer Satellite. Dr. Roger Scott of Ball State spent a sabbatical with Drs. Richard and Karen Hackney.

OGDEN COLLEGE AWARDS OF EXCELLENCE: Congratulations to Ogden faculty, Dr. Gordon Jones (Agriculture), Dr. George Vourvopoulos (Physics and Astronomy), and Dr. Luther Hughes (Agriculture) winners of faculty excellence awards in Teaching, Research and Service, respectively, in 1989. Congratulations also to 1990 winners, Dr. Kenneth Kuehn (Geography and Geology), Dr. Thomas Green (Chemistry), and Dr. Albert Petersen (Geography and Geology).
ALUMNI PROFILES

MATH GRADUATE ASTRONAUT CANDIDATE

Major Terrence Wilcutt has been named by NASA as one of 23 astronaut candidate pilots and mission specialists who will fly in future space shuttle missions. He was selected from a list of 1,945 qualified applicants and from 106 applicants who were interviewed by NASA. Major Wilcutt received the B.A. degree with a major in mathematics from Western in 1974. He taught at Ballard and Manual High School in Louisville before joining the Marines in 1976. He will report to Houston in July, 1990 for a one-year training school to learn every aspect of the shuttle system and afterwards will be assigned to a shuttle project. With the increase in the number of shuttle flights, Wilcutt anticipates venturing into space in about three years. Wilcutt is a native of Russellville, Kentucky. He and his wife Robin have two sons, Andrew, 5, and Aaron, 1.

COMPUTER SCIENCE GRADUATE INVOLVED IN SPACE SHUTTLE MISSION

Patrick Molloy is a stellar example of a Computer Science graduate from Western Kentucky University. Coming to Bowling Green from New Jersey, Patrick graduated in 1981, during the very early days of CS at WKU. In the summer of 1980, he worked as a co-op student at the NASA Marshall Space Flight Center (MSFC) in Huntsville, Alabama, an experience which convinced him that he and the U.S. space effort were ideal "partners."

Patrick has recently completed work on a NASA project for which he received a Director’s Commendation Certificate, only one of 60 awarded by MSFC in 1989, out of 3,500 employees. Earlier work included Spacelab-1 in 1983 and Spacelab-2 in 1985. During these flights, he occupied a console position at the Johnson Space Center. He is now involved with Astro-1, a space lab mission that will observe ultraviolet rays and X-rays. This last project is planned for the shuttle flight designated as STS-35. He will serve as the lead data management coordinator for a team of twelve people, ensuring that information is successfully transmitted from the shuttle through satellites to the flight center at Marshall.

This outstanding Computer Science alumnus has his future work well-planned. Patrick will be developing complex software systems for the Advanced X-ray Astrophysics Facility, a free-flying X-ray telescope, currently planned to be launched in 1997, and expected to fly for at least 15 years!

CHEMISTRY ALUM, HARRY B. GRAY WINS THE AMERICAN CHEMICAL SOCIETY’S HIGHEST AWARD

Harry B. Gray, who is the Arnold O. Beckman Professor of Chemistry at California Institute of Technology, has been named the 1991 recipient of the Priestley Medal for his numerous contributions to chemistry.

Gray was born in 1935 and grew up in Bowling Green, Ky. He received a B.S. degree in chemistry in 1957 from Western Kentucky University, and a
Ph.D. degree in 1960 from Northwestern University, where he began his research on inorganic reactions with chemistry professors Fred Basolo and Ralph G. Pearson.

Gray also is a dedicated educator who continues to teach courses at all levels at Caltech. He is the author or coauthor of 14 books, many of which have become standard texts.

As a colleague points out, "Over the past 10 years, Gray has grown immensely in stature and has become a very important leader and spokesman for chemistry." He has served on the National Science Foundation Advisory Committee for Chemistry, the National Research Council's Committee to Survey Opportunities in the Chemical Sciences, and as chairman of the chemistry section of the National Academy of Sciences.

In addition to his highly productive research efforts, Gray has been active in addressing many of the issues that confront chemistry as a science and a profession. Chemical education, in particular, has been a subject to which he has devoted a great deal of time and effort.

His philosophy is that students should be spending more time in laboratories doing experiments. "One thing I am sure of is that we are doing too much lecturing, and not enough real experimental work," Gray says. "We need experiments that last for some reasonable amount of time -- two, three, or four weeks -- where the student can set up the experiment, do reactions, and characterize materials. That way, the student can build up confidence, make mistakes, maybe go back and start over again."

This piece was based on the cover story in Chemical and Engineering News, June 4, 1990.

OGDEN ALUM NAMED TOP DOCTOR IN STATE

A Daily News Report

Dr. Jerry W. Martin was named Doctor of the Year at the 39th Annual Meeting of the Kentucky Academy of Family Physicians. Dr. Martin graduated from Western Kentucky University in 1958 with a B.S. degree in biology. Dr. Martin was a member of the Alpha Kappa Kappa Medical Fraternity at the University of Louisville School of Medicine and received the M.D. degree in 1963. Following an internship at General Hospital, he entered private general practice in Bowling Green in 1964.

Dr. Martin served in the military as a physician in the 18th Surgical Hospital MASH unit at Fort Gordon and in South Vietnam during 1966-67.

During his practice in Bowling Green, Dr. Martin has been active in professional and community affairs. He is a charter member of the American Board of Family Practice and of the American Academy of Family Physicians. He has received numerous awards for his dedication to the medical profession. His activities in the community include being past
Dr. Jerry Martin and Dr. James King

president and chief of staff of the Bowling Green-Warren County Hospital and HCA Greenview Hospital. He is a member of the Chamber of Commerce and continues to interact with Western Kentucky University in several positions. He serves as Chairman of the Board of Directors of the L.Y. Lancaster Memorial Lectureship Society. This group sponsors an annual dinner and lecture in memory of the long-standing director of Western's pre-medical program, L.Y. Lancaster. The Society also recently established a professorship in the name of Dr. Lancaster.

WKU GRAD DIRECTS AMERICAN LUNG ASSOCIATION IN KENTUCKY

Barry Gottschalk, Executive Director of the American Lung Association of Kentucky, is a 1977 graduate of the Department of Health and Safety's Master of Science degree program in Community Health. Born and raised in eastern Pennsylvania, Barry came to WKU in 1976 as a graduate assistant to pursue a masters degree following graduation from West Chester University near Philadelphia, Pennsylvania.

Following a 3-month internship with the Lung Association in Louisville, Barry was hired as the Health Education Director for the organization. He served in that capacity until 1984 when he was promoted to Assistant Executive Director. Then, in 1985 Barry assumed the Executive Director position for the American Lung Association of Kentucky.

Barry's professional accomplishments include terms as President of the Kentucky Association for School Health, Chairman of the Board for the Western Kentucky Health Education Consortium, and Board member of the Kentucky Chapter of the Sudden Infant Death Syndrome Foundation.

Barry works out of the Louisville headquarters office of the ALA of Kentucky and resides in nearby Floyds Knobs, Indiana with wife Becky and their three children.

ALUMNI NOTES

AGRICULTURE: James Bartos, 1987 graduate, was selected as the outstanding Agronomy graduate student at Auburn University. Fred Alcott, Bowling Green, was elected president of the WKU Agriculture Alumni Association. Dr. Martin Massengale was appointed interim president of the University of Nebraska. He had been serving as chancellor of the University of Nebraska-Lincoln. Fowler Branstetter, Metcalfe County, has received national attention as a result of one of his dairy cows being selected as champion at three different national dairy shows and one Canadian show. BIOLOGY: Dr. James H. Clark, B.S. in Biology, 1959, is presently Professor of Cell Biology, Baylor College of Medicine, Houston, Texas. His research on hormone receptors and cancer continues to be outstanding and...
nationally recognized. **Dr. Gene M. Shearer**, B.S. in Biology, 1961, is currently Senior Investigator at the National Cancer Institute at the National Institutes of Health. Dr. Shearer's research efforts are in immunology. **COMPUTER SCIENCE**: Over 400 Computer Science alumni are employed in nearly 30 states and seven foreign countries. See attached map. The demand for qualified computer science professionals continues unabated, with a 76% increase by the year 2000 predicted by the Bureau of Labor Statistics, the largest of any non-health profession. **GEOGRAPHY AND GEOLOGY**: Tony Able, M.S. Geography, 1986, is employed as a hydrologist by the Environmental Protection Agency in Atlanta. **Paul Anderson**, B.S. in Geology, 1975, is a senior geologist for the John T. Boyd Co. in Pittsburgh, Pennsylvania. **Kevin Brown**, B.S. in Geography, 1986, is employed at an Assistant Systems Manager by the U.S. Bureau of Census in Jeffersonville, Indiana. **Tavis Padgett**, B.S. in Geography, 1986, is a Ph.D. student in geography at the University of Florida. **Timothy Ford**, B.S. in Geology, 1982, is a petroleum geologist for British Petroleum Exploration. Tim is headquartered at Houston, Texas. **MATHEMATICS**: **Dr. Bernard L. Madison**, B.S. WKU '62, was recently appointed dean of the Fulbright College of Arts and Science at the University of Arkansas at Fayetteville. **NURSING**: The department of Nursing hosted a brunch at Homecoming '89 to celebrate the 25th anniversary of the beginning of the Associate Degree Nursing Program at Western. **John Britt**, a 1985 graduate of the Associate Degree Nursing Program, had an article published in Nursing 90 "What to Do When Your Patient Codes." **PHYSICS AND ASTRONOMY**: Several graduates completed the Ph.D. degree this past year. **Randall Harper** in Solid State (North Carolina State); **Wayne Kinzel** in Astronomy (University of Massachusetts). **Laura Mahoney Hodges** has been appointed Manager of Risk Assessment Services for Eckenfelder, Inc., an environmental consulting firm. **Dr. Randall Harper**
DEAN'S NOTE

Dr. Tom Coohill, Head of the Department of Physics and Astronomy, conducted an around the world lecture tour in August of 1989. Dr. Coohill, who served as President of the American Society of Photobiology during 1989, has been called upon to speak widely but the highlight of his year in office was a one month lecture tour that included Korea, China, the USSR, and Hungary. We asked him to tell us about the Trans-Siberian portion of that tour here.

RIDING THE TRANS-SIBERIAN RAILROAD

Tom Coohill

During the years 1987-89 I had been invited by several foreign countries to speak on ozone depletion and its biophysical consequences. I was able to accept some of these invitations and plan a trip around the world in August 1989. Among the most interesting portions of this journey was a ride on the Trans-Siberian/Mongolian railroad. This train originates in Beijing, continues through Mongolia, and terminates at Moscow. The total length of over 5000 miles takes five and a half days. My subsequent trips, Moscow to Leningrad, Moscow to Budapest, etc., increased my total miles to 8000. For me, travelling alone, this was a chance to see most of the USSR and to meet, often forced by boredom, lots of interesting people. It was the trip of a lifetime.

Arranging independent travel in the USSR can be difficult. Their rules require that you show evidence of lodging for each night and where you plan to go each day. Normally one hires a travel consultant to make these complicated arrangements and pays a high price. I chose to do neither and to go it alone. I wrote the Russian Embassy in San Francisco, stated my case (with copies of my invitation to speak at the USSR Academy of Science) and just asked, flat out, for a visa. After an exchange of a few letters, they honored my request. Perestroika! I then, with the invaluable help of Wei Ping Pan in our Chemistry department, began my Chinese arrangements, which included sending the Chinese $370 for a Beijing - Moscow - Budapest train ticket, deluxe first class (The ticket costs $2300 from a travel agent.) So it was off to Korea, Hong Kong, and Beijing, and then an early morning departure on the Trans-Siberian.

The cabin I was assigned was different from any other I had seen. Polished wood, two berths, a table, a garish lamp, one armchair, a sink, and a lower berth (armchair) arrangement. Shortly after our departure, a young Finn attempted to join me but some officials told him his arrangements had been changed and a substitute roommate was assigned to me. He spoke English and looked remarkably like Lenin but heavier. We soon started off with my cache of bottles of drinking water, oranges, dried soup, "In a few hours we reached the Great Wall of China, high in the mountains northwest of Beijing. Although I had spent a day hiking the wall earlier, I still marveled that it was constructed in such difficult terrain."
pretzels, and three Mexican Jumping Beans for companionship. In a few hours we reached the Great Wall of China, high in the mountains northwest of Beijing. Although I had spent a day hiking the wall earlier, I still marvelled that it was constructed in such difficult terrain.

By evening we had reached the Mongolian border where we were shuffled off the train while they picked up each car of the train and changed the wheels! China uses universal gauge track, Mongolia uses the wider Russian gauge.

Once in Mongolia we were informed that there was an outbreak of cholera and we would have to be immunized. Now, since the chance of getting cholera from improper immunization is probably equal to the chance of picking it up on the train, I wrote a bogus health report stating that I had been immunized before I left Kentucky. When a Red Cross nurse with a needle the size of a pencil entered my cabin, I showed her my certificate and was, needless to say, glad when she accepted it. An Australian companion, terrified of that needle informed the nurse that he had been immunized with me. When I nodded my assent, I made a friend for life.

By noon we had reached Ulan Bator (Red Hero) the capital of Mongolia. Here I met the American and British Ambassadors and got a hair-cut, but nearly missed getting back on the train. If I had missed the train, I would have had a four day layover in Ulan Bator. After crossing the Gobi desert we rolled through the Mongolian plains (a little like South Dakota). I saw numerous Russian Army Camps. Apparently if the USSR ever fights China, they want to do it in Mongolia. The Mongolians want the Soviets out but like the money the USSR pours into their economy.

We then crossed the Russian border and changed a little money in the Russian bank ($1.60 = 1 ruble). Within ten minutes I was able to buy rubles on the black market, in my cabin, for 8 cents apiece. For two weeks I could be a millionaire!

By daybreak, the start of my third day, we were at Lake Baikal, the largest (by volume) fresh water lake in the world. There were beautiful woodlands and cottages, like Oregon. But the real adventure began as we traveled the south portion of the lake, i.e. Russian Train Food. Now the train food in China was modest, in Mongolia not bad, but once we entered Russia, the menu shrank to "stroganoff" for breakfast, lunch, and dinner. The choice was eat or don’t eat. But since on long train rides the restaurant car is the travelling lounge as well, I managed to wrestle down some grizzled beef. My taste buds survived because I jumped off the train at every stop to buy anything I could get from vendors selling homemade food from shopping bags. At one stop I bought a Siberian watermelon the size of a cantaloupe. When I told the seller how big our melons were he didn’t believe me.

The highlight on my fourth day was passing an obelisk that had Europe written on one side and Asia on the other.

"The highlight on my fourth day was passing an obelisk that had Europe written on one side and Asia on the other."

The landscape west of Lake Baikal was very flat with birches, birches, birches, until we hit the Ural Mountains, which are covered by pines and not very high. The highlight on my fourth day was passing an obelisk that had Europe written on one side and Asia on the other. Life on the train was comfortably boring. I read several books, including the journals of Marco Polo. But most of the time people just wandered from cabin to cabin learning about one another. I had brought photos of my house (how big!), car (how big!), family (how rich!), and scenes from the southwest (like the movies!). Everyone stared at them for hours, apparently thinking the U.S. was paradise. The Soviets were uniformly friendly, took ten minutes to get to know, and then feed you from their packs (usually good sausage, etc.). The Mexican Jumping Beans turned out to be a big hit, even though almost everyone thought they were some sort of a trick. I gave them away eventually and had to continue petless.

It’s best to stay close to the train at all stations, since it takes off at the whim of the engineer and you often have to run to board. The commodore in each car was large, not very clean, but usually available at all hours. A shower consisted of standing over a hole near the sink in your room and pouring cold water on your head from a hose. Daily showers were not essential under those conditions. A hot water thermos was in every cabin for making tea or soup but alcoholic beverages were not allowed. My roomie and I did throw an anniversary party for a couple using his stash of beer, and my peanuts, pretzels, and oranges. The gift - a Mexican Jumping Bean.

Once past the Urals my interest waned - industrial cities, bleak, boring, and uninteresting after Siberia. I stopped taking photos by then, though I had shot at will elsewhere (even Soviet military trains). I had spent very little money since, with my black market rubles, a full dinner on the train cost me about 20 cents. People who had spread out into large groups were now re-packing and getting ready for Moscow. I had enjoyed the trip but was ready to get off the train as we pulled into the station.

My Russian hosts were at the station to greet me and take me to an apartment near the Science Academy which would
be my home for a week. Quite a difference from my little cabin on the train. Even if you're not a train buff, a trip on the Trans-Siberian is a must for any traveller. Paul Theroux was right, "all other journeys are just peanuts!"

**WKU SPONSORS INTERNATIONAL COAL CONFERENCE**

An International Conference on Trace Elements in Coal was held at Barren River Lake, September 11-13, 1989. This conference, attended by 50 researchers from 11 countries, was organized by Professors George Vourvopoulos and Douglas Humphrey of the Department of Physics and Astronomy, Professor John Riley from Chemistry, Professor Ken Kuehn from Geography and Geology and Mr. Lynn Greeley, Assistant Dean of Ogden College. An international committee from nine countries acted as advisors for the program.

The aim of the conference was to present a comprehensive review of all the important aspects of trace elements in coal; to foster an open exchange of information among the experts and the practitioners in the field, and to examine the importance of certain trace elements, and to analyze the methodology used in measuring them.

The scientific content included topics such as:

- Occurrence and distribution of trace elements
- Environmental considerations (regulations and controls, mining, combustion and ash disposal)
- Trace element recovery
- Biological and health aspects
- Trace elements methodology

Coal is central to the economic health of Kentucky and makes Kentucky an
ideal venue for scientific progress in coal research. By all accounts the conference was a great success.

CHINESE PROFESSORS VISIT WKU

One Shanghai family has called Western Kentucky University's hilltop campus home for the past year, in a continuing collaborative effort between Kentucky and People's Republic of China.

Professors Li-Zhui Gan, Min-Wei Chen, both associate professors at the East China University of Chemical Technology, and their daughter, Margaret, a graduate student in chemistry, all have been involved in various aspects of coal research. Their studies in WKU's Department of Chemistry included work on the desulfurization of coal and categorizing differences between American and other coals.

The Chinese government has funded most of their research and Dr. Charles Kupchella, Dean of WKU's Ogden College of Science, Technology and Health, and Dr. Wei-Ping Pan, Assistant Professor of Chemistry at WKU, have coordinated Western's exchange program with the P.R.O.C.

Like Kentucky, China possesses vast reserves of coal, and the professors will take with them research and information about cleaner burning methods and better mixtures of coal.

The Gans' son, Yaodong, graduated from Western's Master of Science program in coal chemistry in August and is enrolled at the University of Southern California Ph.D. program. Yaodong was the first graduate of Western's Chemistry Department from the P.R.O.C.

INTERNATIONAL NOTES

AGRICULTURE: Dr. Ray Johnson, Professor of Agronomy was selected as an Agency for International Development Linkages Fellow. The purpose of the project is to provide international opportunities and professional development for U.S. university faculty members and to provide expertise to AID projects in third world countries. Dr. Johnson spent over six weeks in Indonesia in August and September, 1989. Most of his time was spent in providing expertise in the development and evaluation of curriculum in soil science at Indonesian universities. While in Indonesia, Dr. Johnson met with three Indonesian professionals who are graduates of WKU's Department of Agriculture and who completed their graduate work under him. Dr. Gordon Jones represented the National Association of Swine Records in October, 1989 at the National Livestock Exhibition in Brazil. Dr. Jones served as official judge for the National Swine Show, gave seminars and consulted with swine farmers on topics of management and breeding. Dr. James McGuire spent eight weeks on a WKU/Murray State U.S.I.A. project in Belize during the 1989 Fall Semester. He taught several short courses, including microcomputer applications in agriculture, at Belize Teachers College. Dr. David Stiles was a participant in feed manufacturing and dairy nutrition training sessions during May, 1990 in Brazil. Dr. David Coffey served as a member of a project evaluation team for a Kentucky-Ecuador Partners project during a ten day visit to Ecuador in April. Dr. James Martin taught a summer course in England on "Gardens of Great Britain". He also continued his research on the London Planetree that he had begun the year earlier while on sabbatical in Great Britain.

BIOLOGY: Dr. Robert Hoyt, Professor of Biology, spent the summer of 1989 doing research in Scotland. He was a scientist in residence at the Scottish Marine Biological Station in Oban, Scotland where he studied receptor organ development in larval fish. Dr. Valgene Dunham, Professor and Head of the Department of Biology, was Invited Lecturer in the Department of Biochemical Engineering at the East China
University of Chemical Technology, Shanghai, Peoples Republic of China. His lectures, during May, 1990, were on DNA replication and included results of his research in this area of molecular biology. Dr. Larry Gleason, Professor of Biology, was named as one of 14 internationally recognized specialists to attend a workshop on parasitology. The workshop was held in March at the University of Exeter, Exeter, England.

**COMPUTER SCIENCE:**
International students constitute 17% of all Computer Science majors, the highest of any program on campus. Dr. Ken Modesitt presented a paper in Vienna, Austria at an international American Society for Engineering Education/Institute for Electronic and Electrical Engineers Conference in July. He also presented talks at Bond University in Queensland, Australia in July 1990 on expert systems, software engineering, and computer-based learning.

**ENGINEERING TECHNOLOGY:**
Dr. William Beard presented a paper in Vienna, Austria as part of the Frontiers in Engineering Conference.

**GEOGRAPHY AND GEOLOGY:**
Dr. L. Michael Trapasso, Associate Professor of Geography and Geology, received a Fulbright-Hays Seminar Abroad Program grant for the Summer of 1990. Mark spent most of the summer in Argentina. Dr. James L. Davis, Professor of Geography and Geology, taught a five week session - graduate level course in England during the summer of 1989. The course was taught through the Cooperative Center for Study in Britain.

**HEALTH AND SAFETY:**
Dr. Agatha Quaye and Dr. Valgene Dunham, Biology
Dr. L. Michael Trapasso
Robert Mensa, physicians from Ghana, spent one month in Bowling Green studying the rural health care delivery system. This program is part of the International Health Fellowship Exchange sponsored by the American Medical Student Association Foundation. This rotation was coordinated by the South Central AHEC at Western in conjunction with the University of Louisville’s Department of Family Medicine.

MATHEMATICS: Dr. James B. Barksdale, Jr., Professor of Mathematics, made the presentation "Another Look at the Binomial Theorem" at the University of Windsor, Windsor, Ontario. Dr. Barksdale is a member of the Mathematical Association of America Panel of Visiting Lecturers.

NURSING: Dr. Mary Hazzard, Professor and Head of the Department of Nursing, presented two papers at the International Council of Nurses 19th Quadrennial Congress held in Seoul, Korea, May 28–June 3, 1989. The papers were "Nursing Delineation Study" and "Development and Implementation of a Rural AIDS Community Task Force".

PHYSICS AND ASTRONOMY: Dr. Dudley Bryant recently conducted some research in optics in England with the Royal Navy. Professor Doug Humphrey is conducting nuclear physics research at the TRIUMPH faculty in Vancouver, Canada. Professor George Vourvopoulos conducted nuclear physics experiments in both Germany and Greece. Dr. De Hui Yang, Director of the Fujian Institute of Testing Technology spent six months working with Dr. George Vourvopoulos.
BACHELORS DEGREE IN DENTAL HYGIENE

Western established an innovative Bachelor of Science Degree in Dental Hygiene beginning in 1988. This program was approved by the Council on Higher Education in December, 1987 and in 1989, we had our first graduates from this program - the only one of its kind in the country. The program is designed to prepare dental hygienists for teaching, organization and management, and research, as well as for clinical practice. Its purpose is to meet the ever-expanding roles of the dental hygienist as delineated by the American Dental Hygienists' Association. Approximately 60 students are currently enrolled in the baccalaureate curriculum.

More than 1400 people took advantage of the Department of Allied Health's Dental Hygiene Clinic last year. Dental Hygiene students working under faculty supervision in the clinic provide dental prophylaxis and check-ups as part of their education in Dental Hygiene.

WKU students under faculty supervision, fill out charts and check patients and health in Western's Dental Hygiene Clinic. At left Dr. Bill Howard supervises the work of a student.
INDUSTRIAL AND ENGINEERING TECHNOLOGY DEPARTMENT SPLITS

On July 1, 1989, the Industrial and Engineering Technology Department split to become the Engineering Technology department and the Industrial Technology department. Upon unanimous approval of the faculty, the university separated the programs into two distinct units. The civil engineering technology, electrical engineering technology, mechanical engineering technology, and electro-mechanical engineering technology programs were assigned to the Engineering Technology department. The remaining programs were assigned to the Industrial Technology department.

The action to split the department should allow accelerated growth in each area. Served by two uniquely different accreditation agencies, the new departments can now focus better on serving their respective students and associated community. A very close working relationship between the two departments is maintained by the department heads. Dr. Frank Conley was named Interim Department Head for Industrial Technology and Dr. Thomas R. Currin was recently named to head the Engineering Technology Department.

HEALTH CAREERS OPPORTUNITY PROGRAM

In its second year of operation, the Health Careers Opportunity Program (or HCOP) is a U.S. Public Health Service funded service grant program with the purposes:

1. Recruiting high school students and college students into the health careers education programs.
2. Retaining students in these programs leading to graduation from Western Kentucky University.

3. Facilitating entry into medical school, dental school and year 4 of the medical technology program.

The HCOP disciplines include community health, dental hygiene, healthcare information systems, health care administration, medical technology and pre-medicine and pre-dentistry.

There are currently 108 students who are in or completing their studies with the HCOP program. The HCOP program is directed by Dr. Thomas Syre, Department of Health and Safety.

AREA HEALTH EDUCATION SYSTEM (AHES)

During this year, fifteen students have completed community health fieldwork assignments with fifteen agencies in eleven area locations. The community health AHES program provides “grassroot” assistance to rural communities throughout the Commonwealth. The program provides financial assistance to students during their fieldwork assignments. Students are encouraged to seek out job opportunities in the much needed rural areas of Kentucky. The financial assistance provides an incentive for students to visit and work in the rural areas and hopefully gain employment with the host agency.

A total of 261 students have completed AHES rotations in rural Kentucky since 1975. The WKU program is the number one program in the state for area retention of students following internship assignments. Dr. Ray Biggerstaff coordinates this program in the department of Health and Safety.

NURSING PROGRAM IN OWENSBORO

In May 1981, the Department of Nursing at Western Kentucky University requested permission from the National League for Nursing Board of Review for permission to establish an outreach baccalaureate nursing program for the RN in Owensboro. Permission was granted and in the spring of 1986, the first nursing courses were offered in Owensboro. Since August 1987, Ms. Katherine Keene has served full time in Owensboro. She has been responsible for much of the teaching especially clinical teaching and advisement.

The department of nursing has utilized interactive television/distance learning for many of the classes. Classes are transmitted via microwave from Bowling Green to Owensboro. During the past 5 1/2 years, eleven nursing classes have been transmitted. This allows faculty to teach in the area of their academic preparation and expertise, allows for small numbers of students, and allows 25% of the credit hours in the major to be taught by doctorally prepared faculty.

Twelve students have graduated from the Owensboro outreach program to date and there are twelve in the senior class for fall 1990. Students take upper division nursing and some support courses from Western Kentucky University and their general education courses from either the Community College, Brescia or Kentucky Wesleyan. Students in the program are all part time and the majority work full time.

WOODROW WILSON INSTITUTES

The mathematics department hosted two one-week institutes, “Functions” in
July of 1989 and "Geometry" in June of 1990. These institutes were part of the National Science and Mathematics Leadership Program which was administered by the Woodrow Wilson National Fellowship Foundation. Dr. Robert Bueker, Head, Department of Mathematics, was the WKU administrator.

The National Science and Mathematics Leadership Program attempts to combat the crisis in mathematics and science education in our nation's secondary schools by enhancing the professional development of teachers in these critical disciplines through these institutes. Each year the program brings 50 of the best secondary school chemistry, mathematics and physics teachers in the country to Princeton University for four intensive weeks of work on new materials supplied by outstanding educators and researchers recruited from around the country. The most dynamic of these Princeton participants are chosen to join teams of four "Master Teachers" who spend five weeks each summer presenting the materials from Princeton and their own ideas on teaching at one-week institutes for other teachers.

In 1989 eighty-three Woodrow Wilson Institutes were held at sites across the country. Western Kentucky University was one of the four sites chosen in Kentucky. Twenty-four Kentucky teachers from twenty-one different school systems participated in the Functions institute. In 1990 eighteen Kentucky teachers from fifteen different school systems participated in the Geometry institute.

BRIGHT STUDENTS LEARN SCIENCE BY DOING SCIENCE IN SPECIAL OGDEN COLLEGE PROGRAM

Three years ago, the Ogden College Foundation agreed to fund an "experiment" in which students with a high aptitude for science would be given a special scholarship entitling them to participate in a special undergraduate research program. Since then approximately 10 new freshmen have been added to the program each year such that next year nearly 40 students will be participating in the program. To qualify for the program, students must be nominated and pass review by an Ogden College faculty panel chaired by Physics and Astronomy professor, Dr. George Vourvopoulos. To qualify for the program students must have an ACT composite of at least 27. During the freshman year these students participate in a seminar program in which they hear about the research of faculty members throughout Ogden College. During the first semester of their sophomore year the students participate in a special seminar entitled, "Introduction to Research" taught by Dr. Vourvopoulos. By the end of their sophomore year students are expected to have linked up with a faculty member to plan and then carry out a research project as a part of their undergraduate experience. The students receive a $1200 scholarship provided by the Ogden College Foundation each year of their participation. These scholarships are often awarded in combination with other scholarship support such that most of the students in the program have a full scholarship covering tuition, books, fees, and room and board. In an article in the College heights Herald last January, Ogden Scholar and Physics major Shane Chapman was profiled. Chapman, who has since started research on the trace elements in coal, is getting a chance at Western that is not available at most universities and that is to work on real research projects with real faculty members.

In recent years there has been a serious decline in interest among high school students in college majors in the sciences and as a result there is

Ogden Research Scholars - (Bottom row) Dallisa Wheat, Julie Sanders, Jenny Chiles, Tom Maynard, Kris Hodge, Russell Cheek, Dr. G. Vourvopoulos, advisor.
expected to be a great shortage of scientists and engineers by the end of the decade. Experts believe that too many students drop out of science because they get discouraged by the details of the classroom. To really appreciate science, the experts say students must move out of the classroom and into the laboratory where they learn about science by doing it. This is the philosophy behind Western’s Ogden Scholarship Research program. Chapman was quoted in the Herald article as saying, “I expect to learn more doing this than I would in a class.” "This gives hands on experience and more direct involvement. In class you just listen. But this will let me talk and discuss the project." Chapman went on to point out that he was turned on by the fact that the project he was working on is real and that it will likely have a real benefit - the improvement of coal as a fuel.

Fiscal Years 1988-91
Employees Trained
WKU Center for Industry and Technology

In response to the need business and industry has for increased training of workers, Western Kentucky University developed a formal program whereby faculty provide in plant training programs throughout the region served by the university. Support for the program comes mainly from the Kentucky Cabinet for Economic Development through its Blue Grass State Skills Corporation. In recent years it has become abundantly clear that American industry has a real fight on its hands to maintain its competitiveness in the world. In sector after sector - automobiles, consumer electronics, semi-conductors, etc., it became obvious that U.S. business was rapidly losing ground to foreign competition. While this was occurring,
universities were experiencing declining federal support and were anticipating declining enrollment sending universities looking for new "market niches" in an era that has become one of more openmindedness about the role of the university. The convergence of these two trends has produced many new kinds of relationships between American corporations and American universities. Such relationships often involve state governments pursuing an interest in economic development.

The idea for a formal program involving Western Kentucky University faculty in industrial training was developed by a group of Western faculty in early 1985. These faculty were involved in providing in plant training supported by the Blue Grass State Skills Corporation. In 1987 "The Center for Industry and Technology" was semi-formally established within the Department of Industrial and Engineering Technology in Ogden College. Despite this parochial beginning, the charter of the Center declared its intent to establish The Center for Industry and Technology as a university-wide entity and the Center has since become attached to the university's Institute for Economic Development. Some of the university's best teachers have been recruited to the work of the Center. The Center staff works mainly to identify faculty able to provide training in light of needs identified by industry and matches these with support available through the Blue Grass State Skills Corporation. The concept has taken off dramatically. An initial catalog published in early 1988 listed some 50 different training topics and by early 1990 a revised edition offered over twice that many. From its modest informal beginning, the industrial training program at Western has grown to the point in three years where it now involves some 54 faculty. By the end of 1989-90 academic year, more than 3700 hours of training (541 training sessions) had been delivered to more that 8700 employees in 28 plants (see Figure). During the 1989-90 academic year the CIT brokered some $200,000 in training, $140,000 of which was provided by the Blue Grass State Skills Corporation. For 1990-91, 2500 hours of additional training involving 8000 employees had already been scheduled as of June 1. The most popular programs continue to be those related to statistical process control, statistics,
oral communication, problem solving and team building.

PROGRAM NOTES

BIOLOGY: The B.S. degree program in Recombinant Genetics in the Department of Biology has over 60 majors beginning its fourth year in the fall semester, 1990. The program has now graduated six students; one in pharmacy school, five in Ph.D. graduate programs. The Department of Biology sponsored a NSF Young Scholars Program in molecular biology for 20 outstanding high school students from across the state. The program, directed by Dr. Valgene Dunham, includes Drs. Houston, Pearson, Rinehart and Toman. Activities focus on research in molecular biology and include discussions and debates on ethical questions concerning science.

CHEMISTRY: The Chemistry Department held its Fourth Annual Workshop for high school chemistry teachers. Keynote speakers were Dr. Mcl Joesten, Vanderbilt University, who spoke on "Safety in the Chemistry Laboratory," and Dr. James Traynham, Louisiana State University, who spoke on "Chemistry and the Italian Connection in the Nineteenth Century." Several WKU faculty also made presentations. The two-day workshop was attended by 25 teachers from 20 area high schools. The first Chemistry Teachers Alliance meeting was held in March. This meeting was for all teachers from middle school to college who were interested in chemistry. The topic discussed was polymer chemistry.

ENGINEERING TECHNOLOGY: A Land Surveying Minor has been established within the department. This minor is open to all students on campus. Reactivation of the Environmental Science program is underway in response to numerous requests from prospective students and industry. MATHEMATICS: The Mathematics Laboratory, located in the lobby of Thompson Complex Center Wing, provides free assistance to students enrolled in any of the seven mathematics courses below Calculus I. Between January 1989 and June 1990, the Math Lab employed fifteen undergraduate students (mathematics majors or minors) and eight graduate students. During that period 14,778 student visits to the Lab were recorded.

NURSING: The Glasgow extension program of the Associate Degree Nursing Program received full approval from the Kentucky Board of Nursing in June 1989. Graduates of the program are certified to write the National Council Licensure Exam to become registered nurses. The baccalaureate nursing program admitted 40 new nurses into sophomore level nursing courses in 1989. This program has been granted developmental approval from the Kentucky Board of Nursing and graduates will be eligible to write the NCLEX exam to become registered nurses.

PHYSICS AND ASTRONOMY: The Department of Physics and Astronomy's Dual-Degree in Physics and Engineering has begun to generate its first graduates. Students are already placed in engineering schools (e.g. Georgia Tech, University of Missouri-Rolla, University of Kentucky) and the first graduates from this five-year program completed their studies. These students now have a degree in Physics from Western Kentucky University and a degree in a field of Engineering from the engineering school they attended.
FLEXIBLE MANUFACTURING CELL

The automated manufacturing laboratory was developed to provide senior students an opportunity to apply principles they have learned in previous course work and to link together the various components of automated systems in a state-of-the-art production facility. Two automated systems courses are required of students before they enroll in the Computer Aided Manufacturing course taught in this facility. A Senior Project course is required of all students pursuing the Computer Integrated Manufacturing Option which affords them the opportunity to research, develop, design and manufacture a part from start to finish using the flexible manufacturing cell.

A major equipment donation from SpanTech in Glasgow spurred development of the laboratory. The manufacturing cell includes: 1) two robotized loading and unloading stations; 2) a PLC controlled conveyor system; 3) two machining centers; 4) a vision inspection system; and 5) a coordinate measuring machine. Two pick and place robots load and unload stock parts on the carousel materials handling conveyor and the entire cell is linked together through digital inputs/outputs of the robots and machining centers. A 386 personal computer is used to upload and download programs and system parameters. Safety devices include infrared light beams for the load-unload robot, a chain link fence for the machining area, and a plexiglass shielding for the machining centers.

Employers are pleased with our co-op students and graduates because they have had excellent hands-on experiences with state-of-the-art equipment.

ENGINEERING TECHNOLOGY MICROCOMPUTER FACILITY

The Engineering Technology department is pleased to report the creation of a new microcomputer laboratory complete with ZENITH 386 microcomputers linked directly to the university’s VAX 6320. Using a layered VMS application called PCSA and DECNET, students and faculty can access virtually any networked computer in the world with only their knowledge of MS-DOS. By integrating the MS-DOS and VAX/VMS environments, computing services of this magnitude are available to a group of users that, in the past, were impossible to obtain.

A successful integration of environments was accomplished at a low cost. Students and faculty using the system have all the benefits of conventional PC, all the benefits of a local area network, and all the benefits of a mainframe yet need only a working knowledge of microcomputers to be productive. The system allows personal computers to act as file servers to each other, allows any VAX on the wide area network to act as a file server to any personal computer on the network, and allows transparent file and application transfers, and data and resource sharing between any two nodes on the network. The department sees the creation of this laboratory as a giant step forward.

COLLEGE HEIGHTS WEATHER STATION

The College Heights Weather Station is sixty-three years old but the latest equipment installed is state-of-the-art. Western Kentucky University’s support through Ogden College of Science,
Technology and Health has made a major improvement to the station which continues to be the best equipped non-National Weather Service station in the Commonwealth. Its improved capacity for hands-on instruction greatly enhances this laboratory for students in the various meteorology and climatology courses.

The newest additions to the weather station are three telecommunications systems which relay information from across the Commonwealth, the United States and various parts of the world. The first is the DIFAX (Digital Facsimile) system which provides about three hundred weather maps per day. These represent the principal products from the National Weather Service and include world-wide, hemispheric, international, and national depictions of surface and upper air conditions.

The second capability is the DDS (Domestic Data Service) system which provides alphanumeric messages from National Weather Stations from all of the United States. These messages include hourly observations, daily summaries, zone forecasts, and severe weather warnings and watches. The Zepher Weather Information System manufactured by Alden Electronics supplies these two capabilities by way of a satellite receiver system mounted on the roof. The third capability is a remote radar system manufactured by Kavouras Incorporated. This system provides the capability to selectively receive real-time radar imagery microwaved from radar stations at Paducah, Louisville, Covington, or Jackson. Up to sixteen time-selective images can be stored and replayed at a controlled time lapse interval. This allows storage and study by students of significantly instructive weather events.

In addition to these newly added capabilities, the College Heights Weather Station continues to use a full complement of recording instruments which continually monitor the weather conditions atop the Environmental Science and Technology Building. These include a thermograph for temperature, microbarographs for pressure, hygrographs for relative humidity, hygrothermograph for both temperature and relative humidity, pyrheliometer for solar radiation, Stokes-Campbell recorder for sunshine, anemometer for winds, and an evaporation recorder for evaporation.

This well equipped laboratory for students from the Department of Geography and Geology provides an
FACILITIES/EQUIPMENT

BIOLOGY: Mr. and Mrs. Joe Barrett of Bowling Green, KY, the family of the late Brett Barrett, recently donated to the L.Y. Lancaster Nature Exhibit a collection made by their son Brett of over 1500 specimens of insects and related reference materials. The Department of Biology has added a computer laboratory as a result of a NSF grant to Dr. Claire Rinehart. Eight MacIntosh SE-30 computers, a laser printer and associated network are installed and presently being used by students and faculty. CHEMISTRY: Among the newest items of equipment in the Department of Chemistry are the following: a LECO, Inductively Coupled Plasma Spectrometer, a DuPont 943 Thermomechanical Analyzer, a Perkin Elmer 1600 Fourier Transform Infrared, a Perkin Elmer 1310 Infrared, a Seiko 200 Thermogravimetric Analyzer/Differential Thermal Analyzer, a Shimadzu 50 Thermogravimetric Analyzer and a Gow-Mac 350 Gas Chromatograph.

COMPUTER SCIENCE: Thanks to a grant from the Ogden Foundation, all faculty offices in Computer Science will now be equipped with state-of-the-art Zenith 386 personal computers networked to the main campus systems and world-wide networks. The student chapter of the ACM, the national professional organization, purchased a Macintosh SE/30 personal computer, to join with the departmental Macs for networking research and courses. A new $11,000 AT&T 6836 UNIX System V, secured by research funding from TVA, AT&T and the University of Kentucky, supports eight independent users. A complete Macintosh II color system was secured via research funding through a President's Unrestricted grant and used in graphics, artificial intelligence, software engineering and computer-based learning courses. Within the last year, over $92,000 worth of advanced software has been donated to the Department of Computer Science, from two dozen companies anxious to have our students experience and evaluate their products.

GEOGRAPHY AND GEOLOGY: The Department of Geography and Geology recently invested $20,000 in Geographic Information Systems software and associated computer equipment. The ARCINFO software is state-of-the-art and combined with the U.S. Bureau of Census TIGER Files place this area at the leading edge of the field. Dr. Stuart Foster offered a trial course on Geographic Information Systems during the Spring of 1990. Ours is the first geography department in the Commonwealth to offer such a course. NURSING: The department of nursing received a $15,000 grant from the Helene Fuld Trust for purchase of interactive video equipment. This will allow the department to purchase 2 interactive video stations and some software for student use. PHYSICS AND ASTRONOMY: The department acquired a VAX 11/785 computer to be used as a multiparameter data acquisition system. This is housed in the nuclear physics laboratory. A new Analysis and Computing Lab has been added which features an IBM Compatible-386 computer for student and professor use.
Western Kentucky University and its Department of Agriculture hosted the nation’s top agricultural expert and policy maker March 12, 1990. U.S. Secretary of Agriculture Clayton Yeutter was escorted into the Brown Ag Expo Center in a white horse-drawn carriage. In the afternoon presentation, Secretary Clayton Yeutter highlighted the Bush Administration’s 1990 Farm Bill and praised American agriculture to the audience of Kentucky farmers, agribusiness leaders, high school and WKU students, University officials, and local interested persons.

Yeutter, who served as U.S. Trade Representative for the Reagan Administration, spoke again in the evening as part of the Rodes-Helm Lecture Series at the Downing University Center. He focused on obstacles that confront international trade in all areas.

A dinner honoring Sec. Yeutter was also held with over 300 persons in attendance.

In November of 1989, a committee of health care administration majors was formed to explore the feasibility of establishing a student chapter of the American College of Healthcare Executives at Western Kentucky University. The By-laws were duly adopted on November 15, 1989 and elections were held for the charter.
officers. In January 1990, the American College of Healthcare Executives Governing Board approved and established the Health Care Administration Program, Western Kentucky University as a student chapter. On January 24, 1990, Dr. Charles Kupchella, Dean, Ogden College of Science, Technology and Health officially established the American College of Healthcare Executives Student Association (ACHESA), Western Kentucky University. During the same ceremonies, the Dean administered the oath of office installing ACHESA's first officers, and unveiled the ACHESA seal. Charter officers were: Steve Rector, President; Heather Wilson, Vice-President; Kira Brown, Secretary; and Stephanie Thompson, Treasurer.

SOUTH CENTRAL AHEC ESTABLISHES NATCHER AWARD

The South Central AHEC created a distinguished service award recognizing outstanding contributions to the goals of AHEC. Congressman William H. Natcher was chosen as the first recipient of the Distinguished Service Award. Presentation of this award will become an annual event.

HILLTOPPER DAYS IN FIFTEENTH YEAR AT WESTERN

Each year in the fall the Ogden College of Science, Technology and Health sponsors Hilltopper Days for Science, Technology and Health. Begun some fifteen years ago, this program attracts some 2000-2500 high school and middle school students to the campus each year to see demonstrations, to listen to special lectures and to participate in demonstrations. Nearly 50 schools participated in the fifteenth annual program held September 22, 1989. Activities are staged by all twelve of the departments in the Ogden College: Agriculture, Allied Health, Biology, Chemistry, Computer Science, Engineering Technology, Geography and Geology, Health and Safety, Industrial Technology, Mathematics, Nursing and Physics and Astronomy.

NOBEL PRIZE WINNER GIVES L.Y. LANCASTER MEMORIAL LECTURE

A Vanderbilt University professor who received a Nobel Prize for his research in biochemistry was the keynote speaker at the annual L.Y. Lancaster Memorial Lecture in October. Dr. Stanley Cohen, who received a Nobel Prize in physiology and medicine in 1986, spoke on "Epidermal Growth Factor and Its Receptor." Cohen received his doctorate in biochemistry at the University of Michigan and his masters degree from Oberlin College. He has published more than 110 articles on biochemistry including papers describing his work with epidermal growth factor. Dr. Cohen has also been...
the recipient of the National Medal of Science and the Albert Lasser Basic Medical Research Award. The L.Y. Lancaster Lecture Series began in 1980 when a fund that was established by a group of WKU alumni seeking to honor L.Y. Lancaster's contributions to the preprofessional programs at Western spanning some 30 years. Dr. Jerry W. Martin, M.D., a Bowling Green physician, serves as chairman of the board of directors of the L.Y. Lancaster Memorial Society. Dr. Lancaster had interests both in medicine and in natural history. The memorial lectureship speaker this coming October 26 will be the artist and naturalist, Ray Harm.

EARTH DAY 90

Western Kentucky University's Horticulture Club along with other sponsors responded to President Bush's challenge to plant 1 billion trees in observance of Earth Day 1990. The Horticulture Club planted a grove of crab apple trees on campus to commemorate the occasion. The Horticulture Club also teamed up with campus radio and TV stations to distribute pine seedlings for Earth Day.

MORE MATH MEANS MORE MONEY

The best predictor of high income, according to the national on-campus report (September 4, 1989), is earned credits in calculus and advanced mathematics. This according to results of an ongoing study of the high school graduating class of 1972. Researchers reported that the number of math courses taken in high school and college that correlates directly with earnings in the ten years following college graduation.

Tree planting in conjunction with Earth Day near Snell Hall.

SPEECHES HIGHLIGHT HEALTH EXPO

Over 30 health care career exhibits and speeches were the highlights of the first annual Health Careers Expo held in April of 1989. According to Dr. Tom Syre who chaired the committee staging the Expo, "the thrust is to encourage students to consider health careers". "One of seven professional positions in the United States will be in the health field by 1995", he said. About 200 students and 15 teachers and counselors from parts of Tennessee and Kentucky registered for the Expo and ultimately over 300 students

Health Careers Expo
participated. The Expo was designed to help students decide on careers in the health field by illuminating the many possible health careers and showing the programs of study at Western leading to these careers. Among the highlights of the day long Expo were a keynote speech by Dr. Nelson Rue, M.D. of Bowling Green, President of the Kentucky Medical Association and a talk given to teachers and counselors by Doug Bruce, director of public affairs at the Chandler Medical Center in Lexington. The Expo was sponsored by Ogden College and by HCA Greenview and the Medical Center Hospital. (This note was adapted from an article by Gina Kinslow in the April 6, 1989 edition of the College Heights Herald.)

OGDEN COLLEGE PROFESSORSHIP PROGRAM

John A. Robinson Professorship

Ogden College now has three endowed professorships in place. The first of these was established by the Ogden Foundation as the John A. Robinson Memorial Professorship. A fund of $58,407 was established in 1986. Interest income from the fund was to be made available to an outstanding member of the faculty in support of their professional work. A selection process was developed and a review panel named Professor John Riley of the Chemistry Department to the Robinson Professorship. Dr. Riley, who is also director of the Center for Coal Science at Western, has made use of the income in support of students in his research laboratory.

HCA Greenview Professorship - A second professorship, this one a visiting professorship, was established in the Department of Nursing by HCA Corporation and Greenview Hospital. This fund of more than $80,000 was set up in 1987 and the income has been used to support two visiting professors to date. The first visiting professor was Peggy Prim who spent over six weeks at WKU interacting with faculty, students, Dr. John Riley

Ogden Foundation Scholars at WKU include 15 seniors. Ogden Foundation Regent Cooper R. Smith, right, presented honorees with certificates recognizing their four years as Ogden Scholars. An Ogden Scholars banquet was highlighted with a keynote speech by Kentucky Congressman William Natcher, an alumnus of Western's Ogden College. Among the recipients was Holly Harvey, left, a senior community health major, Bowling Green Road, Scottsville.
and practicing nurses in this region. The 1989/90 visiting professor was Virginia Betts.

**L.Y. Lancaster Professorship** - When the Ogden Foundation established the Robinson Professorship, it also established a $25,000 challenge to any group or organization able to match that amount to establish a second professorship. The L.Y. Lancaster Lectureship Society was quick to respond and the L.Y. Lancaster Memorial Professorship was established in 1988. Dr. Blaine R. Ferrell, Professor of Biology, was named to the Professorship in 1988. Dr. Ferrell who is also the Pre-Medical Advisor at WKU has used the interest income from the Professorship to support the research involvement of undergrads aspiring to medical school.

A long-range goal of Ogden College is to establish a professorship in each of the 12 departments in the College - each with an endowment of $100,000 or more.
This past year, through the Alumni phonathon and other campaigns, a number of alumni and companies with matching grant programs made contributions to the Ogden College general fund. Among these were the following:

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Morganfield, Kentucky

Smith, Cooper R. Jr.
Bowling Green, Kentucky

Smith, Herbert J. Mr. and Mrs.
Bowling Green, Kentucky

Smith, James A.
Vine Grove, Kentucky

Smith, Joseph R.
Bowling Green, Kentucky

Smith, Mary Ann
Winchester, Tennessee

Sorrell, William H. Mr. and Mrs.
Elizabethtown, Kentucky

Sosh, Woodson W.
Owensboro, Kentucky

Steffey, Darryl L.
Fern Creek, Kentucky

Stewart, Dan R.
Leitchfield, Kentucky

Strother, Lance P.
Louisville, Kentucky

Stucky, William F.
Covina, California

Sutton, Valerie J.
Portsmouth, Virginia

Taylor, Joel D.
Alvaton, Kentucky

Taylor, Virginia A.
Franklin, Kentucky

Texas Gas Trans. Co.
Owensboro, Kentucky

Thomas, Todd A.
Bellevue, Kentucky

Thompson, Teri L.
Hermitage, Tennessee

Tiller, Mitchell R.
Bardstown, Kentucky

Tomes, Letha J.
Midway, Kentucky

Trigg, George F. Jr.
Henderson, Kentucky

United Technologies
Hartford, Connecticut

Vargason, James
Owensboro, Kentucky

Wagner, Mary M.
Louisville, Kentucky

Wagner, Paula M.
Bowling Green, Kentucky

Watts, Susan E.
Nashville, Tennessee

Wawrukiewicz, Mary F.
Portland, Oregon

Weidemann, Wanda J.
Bowling Green, Kentucky

Westfield, Gilbert
Lynden, Kentucky

Weyerhaeuser Company
Bowling Green, Kentucky

Whirlpool Foundation
Benton Harbor, Michigan

Whitaker, Janet M.
Rockfield, Kentucky
Still other alumni made special contributions to special projects. The following, for example, contributed to the L.Y. Lancaster Professorship fund:

- Brake, Evelyn
- Franklin, Kentucky
- Calhoun, Neal
- Hopkinsville, Kentucky
- Clagett, Marjorie
- Bowling Green, Kentucky
- Dawson, Royce
- Owensboro, Kentucky
- Ferguson, Harold
- Nashville, Tennessee
- Galloway, J. B.
- Glasgow, Kentucky
- Glasser, Jack
- Bowling Green, Kentucky

Ogden College of Science, Technology and Health

Still other alumni made contributions to their academic departments. We are grateful for this and all other kinds of support we receive from our alumni. Financial support of this kind makes it possible to support

- our undergraduate research program
- other scholarship programs
- our professorship program
- the acquisition of much-needed equipment.

These things, in turn enable us to achieve the extra-measure of success that keeps us moving toward excellence and greater distinction. Thanks!

Please do continue to consider the programs in Ogden College in your personal plans for charitable giving.
FACTS AND FIGURES

Each year the College also publishes a detailed facts-and-figures internal edition of an annual report. This report charts various instructional indices such as credit-hour production, ACT scores of incoming students - by program, and shows recent trends. A summary of these facts and figures follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>1985</th>
<th>1988</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate Credit Hour Production</td>
<td>45,254</td>
<td>51,630</td>
<td>55,280</td>
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<tr>
<td>Student Faculty Ratio</td>
<td>16.7</td>
<td>18.3</td>
<td>19.2</td>
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<tr>
<td>4-year Program Majors Enrolled</td>
<td>1862</td>
<td>1963</td>
<td>2179</td>
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<tr>
<td>2-year Program Majors Enrolled</td>
<td>595</td>
<td>564</td>
<td>574</td>
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<tr>
<td>4-year Degrees Conferred</td>
<td>462</td>
<td>351</td>
<td>366</td>
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<tr>
<td>2-year Degrees Conferred</td>
<td>197</td>
<td>138</td>
<td>130</td>
</tr>
<tr>
<td>Full-time - Equivalent Faculty</td>
<td>171</td>
<td>181</td>
<td>184</td>
</tr>
<tr>
<td>ACT Composite All Enrolled</td>
<td>20.1</td>
<td>20.6</td>
<td>20.6</td>
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<tr>
<td>ACT Freshmen Composite</td>
<td>19.6</td>
<td>21.0</td>
<td>20.8</td>
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<tr>
<td>Grade Point Average Enrolled Students</td>
<td>2.69</td>
<td>2.75</td>
<td>2.75</td>
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<tr>
<td>Grant Proposals Submitted</td>
<td>38</td>
<td>83</td>
<td>86</td>
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<tr>
<td>Grant Dollars Applied For</td>
<td>$3.2</td>
<td>$4.6</td>
<td>$5.4</td>
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<tr>
<td>Grant Dollars Received</td>
<td>$692,714</td>
<td>$1,410,678</td>
<td>$1,338,896</td>
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