

Guidelines to prepare foreign TAs for teaching

Foreign teaching assistants are an essential part of the teaching function at many universities, but they have drawn criticism around the country because some students have difficulty understanding teaching assistants for whom English is a second language.

The University of Missouri has responded to the criticism leveled at its teaching assistants by strengthening efforts to ensure that foreign TAs are well-prepared for teaching classes.

A three-pronged plan to acclimate TAs to American language and culture has gone into effect after its approval this month by the University's general officers. The policy was announced by Jay Barton, UM vice president for academic affairs, and was based on extensive discussion with administrators, faculty and student leaders from the four campuses.

The new policy requires that:

- students for whom English is a foreign language may not serve as graduate teaching assistants in their first semester of enrollment at UM, except with the special permission of the chancellor,

- all graduate students for whom English is a foreign language will be tested for proficiency in spoken English, at no cost to the student, before receiving a teaching appointment, and

- all graduate students new to the United States will be given a cultural orientation before being allowed to teach.

Existing policy at all four campuses requires prospective graduate students to pass a "Test of English as a Foreign Language," administered in their home countries. The test, however, does not test oral English skills.

Handbook has planning dates, budget guidelines

Planning and budgeting are inseparable, and a new handbook has been developed to help the campuses and UM coordinate the two processes.

The "University of Missouri Handbook of Planning and Budgeting Activities for 1986" provides guidelines for preparing the next budget (for 1986-87) and the next appropriations request for state funds (for 1987-88). The handbook also provides a schedule for planning activities throughout calendar year 1986.

Campuses and UM administration will be asked to request funds in March for program improvements and other improvements in order of priority. Those priorities will then be used to develop University priorities to be incorporated in next year's budget and the appropriations request for 1987-88 state funds, both to be approved by the Board of Curators this summer.

Priority decisions will be based on contributions to achievement of the goals and objectives of the long-range plan and special campus needs and problems. Decisions also will be based on the extent to which the proposed improvements meet the following criteria:

(Continued inside)

The new policy is designed for flexibility. While specific in its goals, it gives wide latitude to the four campuses in implementing those goals. Each campus is responsible for developing its own procedures for complying with the policy.

Foreign graduate students have become an integral part of the teaching force at UM as well as many other universities. Nancy A. Marlin, UM assistant vice president for academic affairs, says 371 of the 1,821 TAs on all four campuses last year were foreign-born. That is about 20 percent of the total, but the concentration is much higher in such areas as mathematics and engineering.

Nationally, more than half the doctoral students in engineering are foreign graduate students because not enough American students study engineering at the graduate level, she says.

"Their presence is an asset because they also bring cultural diversity to our community," says Marlin, "and they can give undergraduates a valuable perspective in foreign language and political science courses."

The new policy is a compromise, Marlin says. It protects the rights of students to learn from teachers they can understand, while allowing departments that rely on foreign TAs to continue to use those who prove they are proficient in English. The policy continues to provide graduate students with

the teaching experience they need to pursue academic careers.

"We seem to be getting a lot of agreement that the new policy is the way to go," Marlin says. "The cultural orientation is as important as fluency in English. For example, in some Asian countries it is considered rude behavior for a student to interrupt a teaching lecture with a question. Foreign TAs need to

realize this is a common, acceptable practice in this country."

The new policy is, in part, a response to legislation proposed by Rep. Steve Danner of Chillicothe in this session of the General Assembly. Danner's bill would give the state the authority to establish oral testing for all foreign faculty at public universities and colleges.

Vice president to serve on panel

Jay Barton, UM vice president for academic affairs, has been named by Gov. John Ashcroft as the University's representative on the Missouri Opportunity 2000 Commission.

The commission was created by Ashcroft to help prepare the state for the next century by identifying critical issues and options that will contribute to the development of the best and brightest future for Missourians.

The list of commissioners for Missouri Opportunity 2000 includes representatives of agriculture, business, labor, government, education and civic leadership. Barton will chair the commission's education committee.

UM is administering the federal grant that funds the project and will provide administrative and technical support as well as background research for the commissioners.

Correction

Our fallibility has been showing.

In the Jan. 16 issue of *Spectrum*, James T. McGill was announced as the next vice president for administrative affairs. In one paragraph of the story, however, McGill was quoted as referring to himself as vice president for academic affairs.

The reference was an editing error and a proofreading oversight. He is vice president for administrative affairs, and he *does* know what his new position will be.

We'll continue our efforts to conceal our fallibility.

— Editor

Governor makes recommendation for UM funding

Gov. John Ashcroft's recommendation of \$227 million for the University's 1986-1987 general operating expenses is a 6.3 percent increase over last year's appropriation. It falls \$29 million short of UM's request of \$256 million, however.

The Coordinating Board for Higher Education's recommendation of \$236 million is a 10.5 percent increase over last year's appropriation. The governor's recommendation reflects 96.75 percent of the CBHE recommendation; he used the same percentage in calculating recommendations for all of the state's four-year institutions.

The governor also recommended UM receive, as part of the operations appropriation, \$2,030,400 for engineering equipment, not quite half the \$4,070,400 the CBHE recommended as part of the state's capital funding for UM.

"I am pleased that Gov. Ashcroft has made a number of positive recommendations with regard to the University of Missouri," says UM President C. Peter Magrath. "If the University of Missouri is to fully meet its obligation as a major force for promoting Missouri's economic and social development, its base resources must be increased."

Magrath cited the governor's endorsement of development of research parks at UMKC and near St. Louis. He expressed appreciation of Ashcroft's support for other UM programs, specifically the multidisciplinary Food for the 21st Century project (\$1.99 million recommended by the governor) and biotechnology programs (\$1 million recommended) on the Columbia campus and intelligent manufacturing on the Rolla campus (\$550,000 recommended). Of the nearly \$32 million the University requested to help fund programs to meet goals and objectives of the long-range plan, \$3.5 million was recommended by the governor.

1986-87 Operations Appropriation

	UM request	CBHE recommendation	Governor's recommendation
General operations	\$256,927,036	\$236,919,326	\$227,828,216
percentage increase*	19.9%	10.5%	6.3%
Higher Education	900,000	900,000	890,000
Research Fund	1.1%	1.1%	0%
Hospital and Clinics	19,907,382	19,879,100	15,277,822
	34.2%	34%	3%
Missouri Institute of Psychiatry	2,340,020	2,218,939	2,178,660
	10%	4.3%	2.4%
Missouri Kidney Program	4,102,067	4,038,556	4,032,434
	5.2%	3.6%	3.4%
State Historical Society	610,411	582,225	571,672
	14.6%	9.3%	7.4%

* increases based on 1985-86 appropriations

"I believe the curators' request is in the best interest of the state; the Coordinating Board for Higher Education's proposed budget moves in that direction, though it does not step forward as fast as we would prefer," Magrath says.

"The University will continue to work for the curators' budgetary position, which outlines the state support needed for the

University to be as effective as possible. I recognize there are other key participants in the appropriation process. The governor, CBHE and the legislators must make their own judgments of what is appropriate and fiscally realistic."

House and Senate recommendations will be followed by a joint legislative appropriation and the governor's action on the appropriation.

Committee seeks research proposals for RAA funding

The Missouri Research Assistance Act Steering Committee is seeking proposals for applied and research projects for the next round of competition for Research Assistance Act funding.

Research projects must be in the areas of agriculture, natural resource management, industrial processes or information processing, storage and retrieval. Applied projects are not restricted by area.

Proposals are due in the Office of the Vice President for Academic Affairs by March 14. Proposals must be processed through campus grants offices and be endorsed by the chancellor. Interested faculty members should contact campus grants offices for information concerning campus deadlines, format for submission and complete research act guidelines.

The Missouri Research Assistance Act was enacted in 1982 to help fund research and applied projects that enhance employment opportunities, stimulate economic development and encourage private investment in the state. One-third of the direct costs of approved projects will be provided through state funds; the remaining two-thirds requires matching funds from industry or other non-government sources.

Further information is available from Nancy A. Marlin, assistant vice president for academic affairs, (314) 882-6396.

Extension service lauded for efforts to help farmers

A U.S. Department of Agriculture report released at the end of 1985 recognizes the Missouri Cooperative Extension Service as one of the nation's most active extension services in providing assistance to financially distressed farm families. MCES is a joint program of the University of Missouri and Lincoln University.

The USDA noted Missouri leads the nation in farm bankruptcies, and nearly 27,000 farm families throughout the state have experienced or are experiencing severe financial problems.

"During the last two years, Missouri Cooperative Extension Service has provided intensive assistance to approximately 2,700 families in developing individual farm business and financial plans. An additional 3,000 farm families will need assistance in developing plans during 1986," the report says.

Among the assistance programs extension offers is the Missouri Financial Advisory Resource Management Support program, a joint effort of extension and the Missouri Department of Agriculture, through which extension-trained farm financial consultants and home economists help farm families with financial planning.

Other assistance programs the USDA noted are community support networks and educational programs offered to the state's agricultural concerns. Extension offers one-on-one consultation, workshops, computer analysis, publications, a telephone hotline, a counseling center and home study courses to meet the needs of the state's farming community.

Extension staff members also help farm families seek ways to supplement or replace farm income by helping them identify marketable skills, find off-farm job opportunities and prepare résumés.

Guidelines set for funding programs

(Continued from front)

- Priority will be given to programs intended to reduce costs or otherwise increase net resources to the University.

- High priority will be given to programs designed to meet specific development needs of Missouri, such as economic development and improvement of public schools.

- High priority will be given to programs designed to attract outstanding students, particularly graduate teaching/research assistants, and to achieve student affirmative action objectives.

- High priority will be given to programs designed to facilitate cooperation among the campuses.

- Priority will be given to programs designed to improve support services for students and faculty, such as computing, libraries and equipment.

Salary and wage principles for the 1986-87 year will be recommended to the Board of Curators in June. The principles are being developed by the Academic Affairs Council, the Administrative Management Council, the Personnel Directors Advisory Council and the General Officers (the president, the vice presidents and the campus chancellors).

Planning schedule, 1986

The first half of 1986 will be spent reviewing the basics of the long-range plan

— its identification of the University's mission, clientele the University serves and UM's elements of distinctiveness. Any changes suggested in those elements of the plan will be presented to the curators in December, when all recommended changes are presented for annual updating of the plan.

The first six months of 1986 will also be devoted to reviewing program priorities adopted by the board last February.

During the last half of 1986, the University will review and consider updating the goals and objectives outlined in the long-range plan.

"Major changes in the list of goals and objectives are not expected," says Richard L. Wallace, associate vice president for academic affairs. "but it may be expected that some objectives will have been achieved and may be removed from the plan. Some objectives may appropriately be replaced with new objectives specifying continued progress toward the plan's goals."

Scheduled during 1986 are these decisions related to long-range planning:

February — curators set student activity and facility fees and room and board rates

May — changes in long-range plan program priorities recommended to the president



June — board action on 1986-87 operating budget, 1987-88 capital request to the state and 1987-88 educational fee rates

July — board action on 1987-88 operations request to the state

September — changes in long-range plan goals and objectives recommended to the president

December — board considers adoption of updated long-range plan

Plan available

The updated long-range plan, approved by the Board of Curators in December, is off the press. Copies of the report, "Toward Excellence: The Next Decade of the University of Missouri," may be requested from UM University Relations, 400 Lewis Hall, Columbia.

The report was approved by the curators in October 1984 and underwent its annual update in December. The goals and objectives outlined in the report have not changed, but the updated version describes the progress that has been made toward achieving the plan's goals and objectives.

Bills propose scholarships, credit transfers

Several bills that have been introduced during the 83rd General Assembly may be of interest to the University community. Summaries of the proposed legislation were provided by the office of the assistant to the president for governmental relations.

- **HAZARDOUS WASTE-AMNESTY DAYS PROGRAM** (Senate and House) would require the Department of Natural Resources to establish and promote an amnesty days program for the collection of small quantities of hazardous waste produced by homeowners, farmers and small businesses free of charge and would provide for the periodic collection of hazardous waste at points reasonably accessible to all parts of the state and disposal of waste in a federally approved facility out of the state. The department would be required to contract for the collection service.

- **CRIMES-LIBRARY THEFT** (Senate) would establish a schedule of crimes relating to library theft and penalties.

- **HEAD INJURIES-REPORTS** (Senate) would require the health department to establish and maintain a head injury information registry and reporting system to collect data and assess needs of head-injury victims and would establish the "Missouri Head Injury Advisory Council" to make recommendations to the governor for a state plan to provide services for victims of head injuries.

- **STUDENTS-EMPLOYMENT AND TRAINING** (Senate) would establish a student employment and training program to be administered by the Coordinating Board for Higher Education and would provide employment for students at certain colleges and universities.

- **TECHNOLOGY-CENTERS FOR ADVANCED TECHNOLOGY** (Senate) would establish centers for advanced technology to encourage greater collaboration between private industry and the state's universities in developing and applying new technologies.

- **HIGHER EDUCATION-LOAN AUTHORITY** (Senate) would expand the higher education loan authority's powers to take action to be qualified to issue non-tax-free bonds or other forms of indebtedness.

- **EDUCATION-LOAN SCHOLARSHIPS** (Senate) would establish a higher education academic scholarship program to provide academic scholarships to certain qualifying students.

- **EDUCATION-FINANCIAL ASSISTANCE TO STUDENTS** (Senate) would establish the student loan interest rate at 9.5 percent for students completing a degree; the rate would be set at market rates for students not completing a degree.

- **DEPARTMENT OF SOCIAL SERVICES-ALZHEIMER'S DISEASE** (Senate) and **ALZHEIMER'S DISEASE AND RELATED DISORDERS TASK FORCE** (House) and **ALZHEIMER'S TASK FORCE** (House) would encourage development of services

for victims of Alzheimer's disease and related illnesses; would authorize the Division of Aging to make grants to public and private entities for pilot projects; would create a 15-member Task Force on Alzheimer's Disease and Related Disorders to conduct a statewide survey to determine incidence of the disease, to review existing services, to suggest changes and to consider establishing a centralized data collection system for information exchange.

- **PUBLIC CONTRACTS-DOMESTIC PRODUCTS** (House) would require that all manufactured goods purchased or leased by a public agency for the construction, alteration, repair or maintenance of public works be manufactured, assembled or produced in the United States.

- **PUBLIC CONTRACTS-MINORITIES** (House) would require state agencies to procure at least 10 percent of their supplies, services and construction from certain minority businesses and would encourage minority businesses to increase their participation in the state's procurement and contract program.

- **EDUCATION-ENGLISH** (House) would require persons teaching in an institution of higher education in Missouri to have completed their primary and secondary education in a nation or territory where English is the primary spoken language or to have passed an English proficiency examination; would give authority to the Department of Higher Education to administer examinations; would not apply to current employees of higher education institutions except upon termination, renewal or renegotiation of contract; would become effective Jan. 1, 1987.

- **EDUCATION U.S. AND MISSOURI CONSTITUTIONS** (House) would permit the state commissioner of higher education to determine college and university requirements in courses dealing with the Constitution of the United States, Missouri Constitution and American history.

- **EDUCATION-COLLEGES AND UNIVERSITIES** (House) would provide that any academic credit earned at any campus of the University of Missouri, any state college or university or any public community college be transferrable for the same credit among all of those colleges and universities, effective in the fall of 1987.

- **EDUCATION-COLLEGES AND UNIVERSITIES** (House) would establish a uniform system of course numbers for all state colleges and universities, beginning in the fall of 1990.

- **PROPERTY CLASSIFICATION** (House) would classify any fraternity or sorority house used for housing members at any college or university as residential real property.

- **HIGHER EDUCATION-CONTRACTS** (House) would allow the Coordinating Board for Higher Education to contract with independent colleges.

Employees enhance skills, personal development

The University of Missouri has no such thing as a free lunch, but more than 3,300 UM employees learned last year that some things are free. Marilyn Parry, Sandy Clark, Mary Vosevich, Karon Matlock and Elmo Law were among those who discovered they can improve themselves, both personally and professionally, at no cost. They did it with a little help from Human Resource Development programs.

During 1984-85, HRD offered 107 classes designed to appeal to almost any interest. Were you intimidated by computers? HRD demystified them with a course called "Understanding Microcomputers." Was your mind blank when it came to putting your great ideas on paper? HRD helped with a class in "Effective Writing." All classes were free of charge to employees of any of the four University campuses.

HRD offers educational programs for University employees through several avenues — HRD-sponsored classroom instruction and programmed self-instruction, adult education programs through the public school systems and UM courses taken for college credit through the Educational Assistance Program.

HRD classroom and self-instruction are structured in two sequences — management/professional development and office staff development. Courses in each sequence are divided into four areas: organization, communication, personal improvement and supervision (for managers) or environment (for office staff).

Four new courses and several departmental seminars were developed and presented during the 1984-85 year: "Effective Supervision," "The One-Minute Manager," "Financial Planning," "Personal Security" and seminars on problem solving, communication, discipline and team-building.

Personal satisfaction, job skills

Employees who have taken advantage of the courses generally agree there are two reasons for enrolling — personal satisfaction and increased job skills.

Sandy Clark, an administrative assistant in forestry, fisheries and wildlife at UM-Columbia, most enjoyed the courses "Handling Stress on the Job" and "Adventures in Attitudes." "It really helped me have a better feeling about myself," she says. Clark learned such skills as how to express herself in front of a group. A UMC employee for 25 years, Clark also found the "Effective Writing" class useful in helping her draft memos and letters for professors and in editing the transactions of the Missouri Academy of Science.

'You learn academics in the (college) classroom but practical suggestions for what's happening in the office — hands-on experience — in the human resource courses.'

— Marilyn Parry

Clark also has taken a number of the self-instructional courses. More than 30 such courses are available, also free of charge to employees. Subject areas include accounting, communication, English, interviewing, management, mathematics, secretarial and technical. Clark enjoys the convenience of self-instructional programs because, she explains, "I can do them on my own time, and I don't have to be out of the office." She simply requests materials via campus mail and receives them in return mail.

Blake Danuser, UM's HRD manager, says participation in self-instructional programs has increased in recent years, partly

due to the acquisition of audio and video tapes on current topics. Tapes on such books as "Megatrends," "The One-Minute Manager" and "What They Don't Teach You at Harvard Business School" are popular with employees.

Sue Troutner, administrative secretary for the UMC associate dean of agriculture, has found adult education courses, paid for by the University, helpful to her career. "I was out of the work force 20 years," she says. The secretarial classes helped her gain necessary skills. Her current position requires shorthand. "I took the refresher course several times and increased my speed each time."



Since 1983, University employees have been able to earn a certificate for completing a minimum number of HRD courses. Marilyn Parry, background, was one of the first two women to earn a certificate in the management/professional sequence.

Through an HRD program instituted in 1983, UM employees may receive a certificate of accomplishment when they successfully complete 30 hours of training with two or more courses in each of the three categories of the office staff sequence or 36 hours with two or more courses in the three categories of the management/professional sequence.

Marilyn Parry, an adviser in the UMC student financial aids office, was one of the first two women to earn a certificate in the management/professional sequence. She is studying for a master's degree in public administration and plans to go into management.

In comparing HRD classes with master's level classes, she says, "You learn academics in the (college) classroom but practical suggestions for what's happening in the office — hands-on experience — in the human resource courses." She is also involved in 26 professional and civic organizations and uses her network of contacts gained through the classes as a resource for speakers.

Mary Vosevich, UM-St. Louis' first woman superintendent of grounds, has found the skills she has learned in the management/professional sequence immediately applicable to day-to-day problem solving. On snowy days, "our shop is responsible for keeping the University open — keeping roads, parking lots and sidewalks clear," she says. The

HRD time management course has helped her develop work schedules for 14 employees to utilize equipment and time efficiently.

established because of the act, so I'm putting together a history of the office at the same time."

Next session of classes

Courses to be offered by Human Resource Development during the next few months:

Management/Professional

Goals and Objectives: Hitting the Right Target, Feb. 13
Managing Conflict, Feb. 27
Problem Solving and Decision Making, March 10
The Employment Interview, March 13
Follow My Orders Exactly/Work Assignment, March 27
One on One: Counseling Skills for Supervisors, April 1
Learn to Listen/Listen to Learn, April 10
Managing the Troubled Employee, April 24
Performance Appraisal, April 28 and 30 and May 2, 6 and 8

Office Staff

Desk Manual Workshop, Feb. 24, 26 and 28 and March 4 and 6
Successful Telephone Techniques, March 25
Records Management, April 3
Human Relations, April 15, 17, 21, 23 and 25
So You Want to be a Supervisor?, Feb. 11
Public Contact, Feb. 18
Success with Stress/Stress Management, Feb. 20

Employee advantages

Most HRD courses qualify participants for Continuing Education Units. Although the CEUs are not transferrable for University credit, they document learning and can be valuable for re-licensing or certification in such areas as first aid. CEUs also are noted on an employee participation record and can be taken into consideration at evaluation times for salary increases and promotions.

Jo Behymer, associate professor in practical arts and vocational-technical education at UMC, teaches some of the HRD courses. She says employees in her classes come away with a "deeper appreciation for the work of other units and the problems they face. It is exciting to watch the changes in interpersonal relationships that take place."

'It's making me much more aware of how we learn. I hope I'm able to translate that knowledge into the classroom to allow the students to learn much more readily and easily than they would have otherwise.'

— Elmo Law

For those employees who see a college degree as the route to advancement or greater personal satisfaction, the Educational Assistance Program is an important University benefit. Employees who work at least 30 hours a week and have completed their probationary periods may enroll for up to six credit hours per semester in college-level credit courses and pay only 25 percent of the educational fee.

Karon Matlock, an adviser in UMRolla's student financial aid office, has completed 53 hours toward a bachelor's degree in economics.

Matlock began her career with UMR 17 years ago as a cashier/clerk and then moved up to senior secretary. She is hoping the degree will help qualify her for a midlevel management position.

In the meantime, Matlock is finding her course work helpful in her present job. "I'm finishing a research paper for a government regulations class, and I'm doing it on the Higher Education Act of 20 years ago. I have come to the conclusion that our office was

Employees use the Educational Assistance Program to work on advanced as well as bachelor's degrees. Elmo Law, UM-Kansas City biology instructor and botany lab coordinator, is earning a Ph.D. in curriculum and instruction with an emphasis in adult education in the UMKC School of Education. Law says the program has been a "tremendous help" economically. Last semester he took six credit hours. "I had to pay approximately \$150; otherwise it would have been \$1,500," he says. "I live in Kansas and would have had to pay out-of-state tuition."

'For the institution to offer this program for employees speaks well of it, because by that effort the University shows it cares.'

— Harold Perry

Law teaches one class per semester in environmental or life sciences with classes ranging in size from 25 to 450 students. He says his Ph.D. course work is making him a better instructor. "It's making me much more aware of how we learn. I hope I'm able to translate that knowledge into the classroom to allow the students to learn much more readily and easily than they would have otherwise."

Needs analysis

In an effort to continually upgrade HRD programs, Danuser and staff are in the process of conducting a major needs analysis survey. The questionnaire, sent to a random sample of employees, attempts to discover supervisors' perceptions of employee needs as well as each employment group's identification of its own needs. The data gathered will allow HRD to quantify participation and cost for each program and set objectives for future programming.

Behymer says the University earns returns on its investment in educational programs for employees in terms of improved staff morale and efficiency. The message sent to employees, she says, is: "My institution is investing in me, so I must be important to my unit."

Harold Perry, UM's director of printing and records management services, agrees. "For the institution to offer this program for employees speaks well of it, because by that effort the University shows it cares."

Observatories offer public a view of Halley's comet

By Steve Liewer
student assistant
UM University Relations

It races through the sky every 76 years, but until now it had spread fear among humans who considered it a precursor of doom.

But this year's return of Halley's comet has been widely anticipated by the general public as well as professional astronomers. The public has been disappointed, however, since this is the dimmest appearance by Halley's in 2,000 years. Earth is on the opposite side of the sun when Halley's is at its brightest. During the comet's closest approach to Earth on April 11, it will still be 39 million miles away.

Astronomers, on the other hand, have been quite pleased with what they've seen. The astronomers at the four UM campuses have spent many nights at their telescopes observing the comet since it reappeared last fall, taking full advantage of the opportunity to study the infrequent celestial event.

Halley's limited visibility has sent people flocking to the four campus observatories to get a glimpse of the comet. Each campus has opened its telescope for public viewing, when the weather has permitted, from once or twice a week at Columbia to nightly at Kansas City.

"We've been getting terrific crowds," says Stanley Warkoczewski, a UM-Kansas City astronomer. Up to 500 people have waited in line for a look at the famous comet every night for about five weeks at UMKC's Warkoczewski Observatory, which is named for the astronomer and his wife.

Choir to perform at Kennedy Center

The University Singers choir of UM-St. Louis will perform in concert March 16 at the Kennedy Center for the Performing Arts in Washington, D.C. In 1984, the group performed a lunchtime concert in the Rayburn Building on Capitol Hill for Missouri legislators and UM alumni.

The Kennedy Center concert, which honors all UM alumni in the Washington area, is part of the University Singers' 1986 tour, during which they will perform in Missouri, Illinois, Indiana, Kentucky, Ohio, Pennsylvania, Maryland and the District of Columbia.

The Washington concert is sponsored by the UMSL Alumni Association and alumni of the other three UM campuses.

Bruce Vantine, assistant professor of music at UMSL, has conducted the University Singers since 1980. The 45-voice ensemble performs a wide variety of sacred and secular choral music from the Renaissance through the 20th century, as well as familiar carols, spirituals and folk melodies.

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This photograph of Halley's comet (visible near the center) was taken from the UM-St. Louis Observatory in the early evening of Jan. 10, while the comet was in the constellation of Aquarius. The photograph was taken by Jim Blackwell, an UMSL senior.

"The viewing has been quite satisfactory," Warkoczewski adds. "I think we satisfied most of the people."

Bruce Wilking, UM-St. Louis assistant professor of physics, says the comet's lack of brightness has not prevented astronomers from gaining new knowledge. Mostly, he says, astronomers are checking Halley's actual behavior against their predictions to try to confirm theories regarding the composition of comets.

"Comets look mostly like dirty snowballs," Wilking says, and are thought to be a mass of ice and dust a few miles across. As comets approach the sun, sunlight evaporates the ices from the surface and the gases and dust that are released form a tail that may

extend 100 million miles into space. Wilking says Halley's comet has behaved pretty much as expected, although its frequent changes in brightness have proved unpredictable to scientists.

UMSL is also playing a role in the International Halley Watch, a worldwide network of scientists who are observing the comet in different ways. Although none of its scientists are engaged in long-term comet research, UMSL has been taking nightly photographs of Halley's comet and sending them to other observers for analysis.

"By monitoring changes in the comet, we may turn up something (new)," Wilking says.

UMSL has also held several open hous-

es at its observatory, and Wilking says they have drawn crowds of up to 500 people. UMSL's special Halley's comet hotline, updated weekly, has given information to many callers about how best to observe the comet. That number is (314) 553-5706.

UM-Rolla's Department of Physics and its Astronomy Club have staffed the Rolla observatory at several open houses that have accommodated as many as 300 people. Students have also spent their spare time photographing the comet through the observatory's 16-inch telescope, and special evening courses have fanned excitement about Halley's reappearance.

John L. Schmitt, UMR research associate professor of cloud physics, reports that one of the pluses about the visit of Halley's comet has been a resurgence of interest in astronomy. Enrollment in astronomy classes has risen about 30 percent this year, and he attributes that increase at least in part to the comet. Similar enrollment jumps have been reported at the other campuses.

"In the long term, I think it will be a very good thing for astronomy," Wilking says. "We are reaching a lot of younger people we might not have reached otherwise."

Halley's comet has disappeared behind the sun until late February, so none of the observatories plans any further special open houses at least until then. Since it will reappear only in the early morning in March and early April, UM astronomers recommend that potential comet viewers scan the skies with binoculars. Schmitt says that's the best way to observe the comet, since binoculars allow a wider field of vision than a large telescope and are better for observing the tail.

Observatories will continue their regular open houses.

Wilking says the comet should be visible for a short time during UMSL open houses later this year. Those open houses are scheduled for 8:30 p.m. May 3 and May 17 and 9 p.m. June 14.

Jobs

The following administrative/professional and academic vacancies were listed with *Spectrum* as of Jan 24. Anyone interested in a position should contact the appropriate department or personnel office.

UMC: director, Black Studies Program; asst. professor, obstetrics/gynecology, political science, recreation/park administration, surgery, housing/interior design (2), human nutrition/foods/food systems management (3), pharmacology, curriculum/instruction (2), educational/counseling psychology, art education; asst./assoc./full professor, industrial engineering; asst./assoc. professor, information science, family economics/management, veterinary pathology, health/physical education, surgery, veterinary medicine/surgery, management (2), mathematics (2), clinical psychology; research associate, microbiology (3); assoc. professor, family/community medicine, advertising, pharmacology; asst. professor/counseling psychologist, educational and counseling psychology (2); instructor, television journalism; instructor/director of computer program training, TODCOMP; asst. instructor, child/family development; clinical instructor/clinical asst. professor, family/community medicine; instructor/asst./assoc.

professor, business administration, nursing (5); librarian I or II/science librarian; librarian I/asst. acquisitions librarian; librarian I/general reference librarian; librarian I/information services librarian; postdoctoral fellow, civil engineering; research assistant, obstetrics/gynecology; professor/chairman, psychology; asst. coach, gymnastics; director, development fund; energy management engineer (3); student services adviser, residential life; financial aid adviser; food technologist; staff nurse; environmental chemist; sr. research specialist (3); research specialist (6); assoc. director, admissions; computer programmer/analyst I; career planning/placement adviser, TODCOMP; information specialist; sr. information specialist. **UM:** coordinator, financial systems education/analysis; supervisor, printing bindery/finishing operations; construction project manager; information/computing support specialist (2); assoc. director, state historical society; reference specialist, state historical society.

UMKC: grader, business/public administration; asst./assoc. professor, health services administration, chemistry, removable prosthodontics, marketing, operations management or management information systems,

accountancy; visiting professor, theater; adjunct faculty, biology; asst. professor, applied developmental psychology, community/clinical psychology; instructor/asst. professor, communication studies; research associate, Institute for Human Development; theater assistant (10); dean, pharmacy; visiting research associate, physics; lecturer, chemistry, basic life sciences, business, history, meteorology, arts/sciences continuing education, computer science, engineering; clinical faculty, dentistry; asst./assoc./full professor, computer science; computer programmer I; continuing education coordinator; docent team assistant; sr. accountant.

UMR: asst. professor, electrical engineering; lecturer, engineering management; asst. director, admissions.

UMSL: asst. professor, marketing, statistics, music, behavioral management (2); assoc./full/visiting professor, marketing; asst./assoc. professor, computer science; asst./assoc./full professor, accounting, finance, management science/information systems; asst. professor, optometry; chief, optometry low vision clinic; office system specialist II.