

Teasdale recommends \$136 million

Gov. Joseph P. Teasdale has recommended to the General Assembly that the UM system receive about \$136 million in state general operating and education funds for fiscal 1978-79.

Gov. Teasdale's recommendation, which does not include funds for the University hospital, is an increase of about \$10.3 million over the \$125.7 million in state appropriations received last year.

UM is seeking \$140.7 million in general operating and education funds for next year. The Coordinating Board for Higher Education has recommended \$139.6 million.

In a separate recommendation, the governor proposed that the University hospital be funded by about \$11 million, an increase of about \$700,000 over the present year's appropriation. The University is requesting about \$11.4 million, and the CBHE has recommended an amount only slightly smaller.

This is the first time that UM has

1978-79 UNIVERSITY OF MISSOURI SYSTEM STATE OPERATING FUNDS REQUESTS AND RECOMMENDATIONS				
	1977-78 Appropriation	1978-79 Request	CBHE Recommendation	Governor's Recommendation
Educational and General Budget (Excluding Hospital)	\$125,742,309	\$140,682,391	\$139,592,080	\$135,988,677
University Hospital	10,271,355	11,414,980	11,376,449	10,949,777
Missouri Institute of Psychiatry	1,645,055	1,813,555	1,812,127	1,774,804
Missouri Kidney Program	1,882,600	2,149,280	2,149,179	2,146,280
State Historical Society of Missouri	326,349	365,249	364,657	354,470

broken its request for state funds into separate categories for general university operations and the hospital. The reason for the separation is to distinguish between funds needed for academic and research programs and funds necessary for the hospital's health care role.

Gov. Teasdale also recommended the following operating funds for three statewide programs administered by UM: about \$1.8 million for the

Missouri Institute of Psychiatry; about \$2.1 million for the Missouri Kidney Program and \$354,000 for the State Historical Society of Missouri.

For capital improvements in 1978-79, the governor recommended slightly less than \$4 million for UM, with about \$2 million earmarked for repairs and improvements to facilities on the four campuses and almost \$2 million for improvements to the hospital. The University is seeking

\$29.7 million in general capital improvement funds and \$3.6 million for the hospital.

The governor's budget recommendations now will be subject to consideration and action by the General Assembly. Hearings on the University's operating funds requests already have been held by the House and Senate appropriations committees. However, neither committee has yet announced its recommendation.

New law changes use of music, machines

By Nancy R. Divis

January 1 may have put an end to encores... at concerts or copying machines.

The new copyright law which became effective on that date has made extensive changes in the use of music and photocopying practices.

The full effect of the law is still uncertain but most experts agree it will dramatically change programs and budgets at colleges and universities across the country.

A far-reaching measure, the copyright law has stumped university legal staffs and caused confusion among musicians and librarians. Exemptions

and unclear language muddy interpretations of the law. Things are further complicated by the fact that the old law was much abused.

"The copyright law has been one of the most violated in this country," says Jackson Wright, UM general counsel. "But the fees in the past were difficult to collect so no one paid much attention to the violations."

No more.

"I have no idea what it will cost the University in royalties or what effect it will have on the budget," Wright says. "This could mean a lot of money and we're going to be policed pretty heavily."

While there are exceptions, use of

photocopying will be restricted to single copies for personal use or research. Multiple copies will generally require permission of the copyright owner and/or payment of a fee.

Permission may be obtained by writing to the holder of the copyright, stating when and how the material will be used and the number of copies. Generally, when the use is not-for-profit, permission is granted without charge.

The area of music is complicated. Basically, the new law restricts the use of music at colleges and universities for teaching purposes only unless royalties are paid, thus removing the not-for-profit exemption under the old law.

This affects any event where there is an admission charge, the performers are paid or there is commercial benefit to either the performers or the organizers.

UM campuses are not scheduling concerts until some national agreement is reached with the three agencies

which represent most publishers and composers.

Representatives of college and university organizations have been meeting with the American Society of Composers, Authors, and Publishers, Broadcast Music, Inc., and the Society of European Stage Authors and Composers for several months but have been unable to reach any agreement, Wright says.

The goal is a blanket arrangement whereby a flat fee would cover most musical performances on college campuses.

What happens to concerts already scheduled?

If fees must be paid beforehand, what happens to spontaneity in a performance such as encores or requests from the audience?

How will the law be policed?

And finally, where will money be found in the middle of a fiscal year to pay for additional fees?

Wright estimates it will be some (continued on page 2)

BEWARE

"It now has teeth and will bite".



Before you start copying freely

Be sure you understand the copyright Law

The above warning is now displayed throughout Academic Support Services on the Columbia campus. UMR, UMKC and UMSL have also begun distributing warnings.

Prefiled house, senate bills relating to UM

More than 1,200 bills and resolutions have been filed in the Missouri General Assembly since prefiling began Dec. 1. The current legislative session—the so called “short session” of even-numbered years—convened Jan. 5 and will last through April 30.

Many bills of interest to UM have been filed. Others may be filed before the cutoff date.

During the session, *Spectrum* will list bills of particular interest to UM and report on their movement through the legislative process.

Among bills introduced, printed and received to date are:

HOUSE BILLS

HB 884—Provides financial aid for medical school students who practice in Missouri's rural areas or areas of defined need. Allows 25 loans a year with a maximum of 100 loans in force at any one time. Half of the loans would go to rural area students. All recipients must be Missouri residents.

HB 886, HB 988, HB 1292, HB 1443 and SB 660, SB 684—All of these bills relate in varying degrees to providing liability protection for Missouri governmental units. (Editor's Note: Last September the Missouri Supreme Court revoked the principle of sovereign immunity which had protected Missouri governmental units from being sued. The court declared that the immunity will become invalid Aug. 15, 1978).

HB 891—Extends Missouri student

loan program to all post secondary students rather than just to those in higher education and vocational institutions. Includes technical schools. Allows tighter rules on collection of loans, including use of private collection agencies.

HB 941—Prohibits teachers and others from being employed by a school district if the prospective employee is related within the fourth degree to any of the district's school board members.

HB 989—Provides that any person appointed to a bipartisan board, commission or other entity must be certified as a member of the political party claimed. Certification would be in writing and by oath by the county chairman of the political party claimed by the appointee.

HB 1019—Provides a legal “right to die” under certain conditions.

HB 1020 and SB 600—Establishes a legal description of death.

HB 1222—Provides that the State Division of Design and Construction will furnish advisory and work performance inspection services to all state agencies. Includes review and approval of architectural and engineering contracts and plans, supervision of construction, purchase of real estate or inspection and maintenance of buildings.

HB 1107—Requires annual reporting of legal malpractice claims to the director of the State Division of Insurance.

HB 1147—Prohibits Missouri public higher education institutions from operating resident centers away

from main campus, except that Southwest Missouri State University is allowed to continue operating a center at West Plains.

SENATE BILLS

SB 517—Calls for a student to be a member of the UM system Board of Curators. Also provides for appointment of a student on boards of other Missouri public universities.

SB 637—Provides immunity for physicians and nurses from personal liability for civil damages in certain emergency situations.

For further information on any bills or resolutions, and their latest status in the legislative process, contact Marilyn Selovich, Office of Governmental Relations, 309 University Hall, Columbia. Telephone: 314-882-4355.

Article outlines copyright rules

(The following article is reprinted with permission of *The Chronicle of Higher Education*, October 11, 1976. Copyright (c) 1976 by Editorial Projects for Education, Inc.)

Here are some of the implications of Congressional guidelines on permissible photo-copying of copyrighted works.

A teacher may not:

Make multiple copies of a work for classroom use if it has already been copied for another class in the same institution.

Make multiple copies of a short poem, article, story, or essay from the same author more than once in a class term, or make multiple copies from the same collective work or periodical issue more than three times a term.

Make multiple copies of works more than nine times in the same class term.

Make a copy of works to take

the place of an anthology.

Make a copy of “consumable” materials, such as workbooks.

A teacher may:

Make a single copy, for use in scholarly research, or in teaching, or in preparation for teaching a class, of the following:

- A chapter from a book.
- An article from a periodical or newspaper.

► A short story, short essay, or short poem, whether or not from a collected work.

► A chart, graph, diagram, drawing, cartoon, or picture from a book, periodical, or newspaper.

Make multiple copies for classroom use only, and not to exceed one per student in a class, of the following:

► A complete poem, if it is less than 250 words and printed on not more than two pages.

► An excerpt from a longer poem, if it is less than 250 words.

► A complete article, story,

or essay, if it is less than 2,500 words.

► An excerpt from a prose work, if it is less than 1,000 words or 10 per cent of the work, whichever is less.

► One chart, graph, diagram, drawing, cartoon, or picture per book or periodical.

A library may:

For interlibrary-loan purposes:

Make up to six copies a year of a periodical published within the last five years.

Make up to six copies a year of small excerpts from longer works.

Make copies of unpublished works for purposes of preservation and security.

Make copies of published works for purposes of replacement of damaged copies.

Make copies of out-of-print works that cannot be obtained at a fair price.

Rare book given

Prior to his death on Dec. 19, the late Lloyd E. Berry, dean of the UMC Graduate School, presented Ellis Library with a valuable, rare book during the graduate commencement exercises.

The book, *Beda Presbyteri Anglosaxonis Viri Eruditissimi, de Natura Rerum Et Temporum Ratione. Basileae Excudebat Henricus Petrus Mense Martio, An: M.D. XXIV.*, is an early history of England.

Dr. Berry had purchased the book while working for his doctorate at Cambridge University.

UM librarians issue guidelines for copying

In an attempt to clarify the copyright law, UM librarians have issued the following guidelines effective this month:

- All unsupervised coin-operated copiers will have signs placed on or over them which will state: “Notice: the copyright law of the United States (Title 17, U.S. Code) governs the making of copies of any copyrighted materials. The person using this equipment is liable for any infringement.”

The copy services of the libraries will make single copies of no more than one article from a periodical issue or a small part of any other copyrighted work at the request of library users. A notice of copyright will be stamped on the first page of each item copied which will state: “Notice: This material may be protected by copyright law (Title 17, U.S. Code).” Signs worded, constructed and displayed in accordance with the regulations of the Copyright Office of

the Library of Congress as they appear in the *Federal Register*, Volume 42, No. 221 (pp. 59264-5) will be placed prominently in all supervised copy services. All order forms used in the supervised copy services will contain the same wording as the signs.

The libraries will make multiple copies for any identified UM faculty member who signs a statement that the multiple copies will meet all requirements for classroom use only and meet the requirements of spontaneity, brevity, and cumulative effect, as defined in the House Judiciary Committee's report titled “Agreement on Guidelines for Classroom Copying in Not-for-Profit Educational Institutions.” It is understood that, in signing such a statement, the faculty member is acting as a representative of UM.

- Single copies only of the following copyrighted materials will be held at the reserve desks of the libraries for limited circulation:
 - a. A chapter from a book;
 - b. An article from a periodical or newspaper;
 - c. A short story, short essay or short poem, whether or not from a collective work; and
 - d. A chart, graph, diagram, drawing, cartoon or picture from a book, periodical, or newspaper.
- The libraries will follow the National Commission on New Technological Uses of Copyrighted Works' Guidelines for Interlibrary Arrangements as written in Conference Report 94-1733.
- Exceptions to these guidelines will be for non-copyrighted materials or those instances in which written permission from copyright holder or its legally acceptable equivalent has been secured.

(continued from page 1)
time before these questions and a myriad of others are answered. Until then, he is cautious—and urges others to be.

The issue of who is liable for copyright violations also is unresolved. The UM attorney says that anyone representing the University—from concert organizers to faculty members making copies for classroom

use—could be named in a suit along with the University.

“I hope we can keep a low profile until this thing is tested in the courts,” he says. “It’s like a field of daisies. It’s just a matter of which ones they (the publishers) decide to pick to make their bouquet.

“I just hope the University of Missouri isn’t part of that bouquet.”

UM researchers provide industry with better material

By Anne D. Robinson

A current project at the University of Missouri system Research Reactor in Columbia may provide the U.S. electronics industry with a semiconductor material which improves device performance without increasing cost, according to Jon Meese, senior research scientist.

The research focuses on silicon, the most widely used material for semiconductor devices. Silicon semiconductor devices are used to convert alternating current to direct current in implements ranging from television sets and radios to computers and scientific instruments. Because the devices also control the amount of current in electronic circuits, they are used in items such as variable speed drills, light dimmers and electrical power industry distribution grids.

Although silicon is the most commonly used solid state semiconductor material, there are many production problems involved in the control of silicon's electrical properties. Necessary trace impurities such as phosphorus must be added. The conventional method of adding these impurities to molten silicon, which must be done during crystal growth, has proven to be an expensive, inaccurate way of "doping," Dr. Meese says.

Dr. Meese; reactor staffer Steven Gunn; professors Don Alger and Bob

Brugger; and UMC graduate students Paul Glaeron and Bill Richardson have been working on a solution. Under a U. S. Air Force contract and an agreement with Monsanto, one of the nation's leading chemical manufacturers, the researchers have developed new techniques associated with the neutron transmutation doping (NTD) process which improve both the dose accuracy and irradiation uniformity of the silicon.

During the doping process developed at UM, silicon ingots are irradiated in the reflector region of the University reactor in a special facility which allows the silicon to be rotated much in the same manner as a chicken on a rotisserie. A small fraction of the silicon atoms capture neutrons from the reactor and transform themselves into the desired dopant, phosphorus. The result is precision doping of the material.

"Our reactor is the only one in the country doing this on a large scale," Dr. Meese says. "Monsanto is one of the largest producers of single crystal silicon in the world, and we have one of the largest research reactors in the country, so obviously it is a mutually beneficial research project for both of us."

Dr. Meese, whose specialty is investigation of radiation damage in semiconductors, says that the neutron method of doping silicon is superior to



Jon Meese, senior research scientist at UM, "cans" processed silicon for shipping.

the conventional method for several reasons.

"One of the advantages of this process, called NTD-SI, is that much higher device reverse breakdown voltages are obtained—in other words, NTD-SI devices handle larger voltages than devices made from conventionally doped silicon.

"The uniformity of the electrical resistance is also greatly improved and should lead to higher manufacturing yields for the device manufacturer," he adds.

Dr. Meese points out that the accuracy of the neutron-doping is within plus or minus three percent whereas the accuracy of the

conventional method is about plus or minus 60 percent. In addition, the yield of useable silicon through neutron doping is better than 90 percent, compared with the conventional method's 60 percent.

"Since it costs more to have the conventionally doped silicon repurified and regrown, the neutron-doped silicon is advantageous to the silicon producer even though it initially sells for the same price as the other," Dr. Meese explains.

As a byproduct of the research, the UM Research Reactor now irradiates about four tons of neutron-doped silicon per year for industry.

Curators okay increases in housing rates

In a December meeting, the Board of Curators authorized an increase in campus housing rates next summer to offset the rising cost of food, labor and utilities.

Three UM campuses which have housing units—Columbia, Rolla and Kansas City—are experiencing budget deficits this year. The increases, which were approved by a 6-1 vote as two curators were absent, range from \$180 at UMC to \$235 at UMKC for an academic year.

Even with the rate increase, which is based on a projected inflation rate of 7.1 percent, the UM housing systems on the three campuses are expected only to break even in 1978-79.

In other action the board:

- Was informed that the UMC College of Veterinary Medicine finally has gained full accreditation from the American Veterinary Medical Association after trying for 31 years. A lack of adequate physical facilities was the long-term problem with gaining accreditation. However two new buildings were opened last spring after the Missouri legislature appropriated \$6.4 million for construction.

- Conferred emeritus titles on three professors: Dickran Erkiletian Jr., UMR professor emeritus of

(Editor's note: President Olson made the following statement at the Dec. 16 meeting of the Board of Curators.)

The idea of establishing a school of optometry has been discussed on many occasions in Missouri over an extended period of time. Several studies have been done indicating a need for additional optometrists. The central question relates to funding such a program.

The position I have taken since I became president of the University, a position taken after consultation with the Board of Curators, is simply this: It would be improper to request a school of optometry until the University's present programs are adequately supported. It seems to me that we must achieve a greater level of quality with existing programs before assuming massive new responsibilities such as those which would be entailed in a school of optometry.

I mention this in light of new legislation which I understand has been prefiled for the upcoming session of the General Assembly. This bill calls for the establishment of a school of optometry on a regional basis, with support to come from several states and possibly the federal government. It seems to me that such a concept is more realistic in view of the problem of limited resources and the need to achieve the greatest possible use of those resources.

If the citizens of Missouri and state officials feel that an optometry school must be established, I would urge consideration be given to the regional proposal. But, I continue to maintain that such an approach should be pursued only after we protect quality in existing programs. The establishment of a school of optometry should be undertaken only after current programs of the University are adequately funded.

mathematics; Rudolph Heitz, UMKC professor emeritus of law; and Henry D. Musselman, UMKC professor emeritus of dentistry. Dr. Erkiletian and Dr. Heitz's appointments are effective Sept. 1, 1978. Dr. Musselman's appointment was made retroactive to May 15, 1976.

- Authorized the establishment of a B.S. degree program in life sciences at UMR and the reinstatement of M.S. and Ph.D. degree programs in rural sociology at UMC.

- Awarded a \$394,065 contract to CGR Medical Corp. of Baltimore for

radiological fluoroscopy equipment for the UMC Medical Center. The equipment will be used for gastrointestinal examination and replaces older, outmoded equipment which produces more radiation than the new model.

Order changes UM procedures

The executive order specifying the authority for employment or termination of certain employees has been slightly revised.

Executive Order No. 6, established in 1967 by the Board of Curators, has been amended allowing the chancellors or their designees to approve the employment or termination of academic staff (except tenured faculty) whose salaries are less than \$20,000 and non-academic staff whose salaries are less than \$18,000.

The revision is designed to reduce the number of appointments requiring the president's approval. All personnel actions which exceed the new designated salary levels must meet the president's approval, in addition to that of a chancellor or vice president.

The previous authorization levels for chancellor were \$18,000 for academic and \$12,000 for non-academic appointments.

The curators receive a monthly summary of personnel actions taken by the president.

THIS & THAT, HERE & THERE

Concerts

Jazz Recital—8:15 p.m., Jan. 16; UMKC Stover Aud.

Monday Night Opera, Boris Goudnov—8:15 p.m., Jan. 23; UMKC Stover Aud.

Johnny Cash Show—8 p.m., Jan. 20; UMC Hearnes Aud.

Jean-Pierre Rampal, flutist—8:30 p.m., Jan. 24; UMSL J. C. Penney Aud.

Jobs

The following administrative, professional and academic vacancies were listed with *Spectrum* as of Jan. 4, 1978:

UMC: Asst. prof.; art; biological sciences (2); child health; computer science; forestry; fisheries & wildlife; geography; geology; history; housing and interior design; marketing (asst./assoc.); medicine; nursing (9); psychology (2); speech and dramatic art; Whiteman MBA program (asst./assoc.)

Assoc. prof.: geology; human nutrition, foods and food systems management (assoc./prof.); law; nursing (2); Professor: business administration; law (2); marketing; Chairperson: animal husbandry.

Instructor: animal husbandry; human nutrition, foods and food systems management; (2); nutrition & dietetics (asst. instructor); clinical instructor and medical social worker (2) physical medicine and rehabilitation; speech and dramatic art.

Archaeologist I; assistant director, alumni & development communication; assistant editor, business policy & procedure manual; assistant supervisor, building services; coordinator, safety & risk management; health physicist; research specialist (3); sr. methods and procedure analyst; sr. research chemist (3); systems analyst.

UMC Med Center: artist; computer prog/analyst; computer project mgr.; head nurse (4); mgr., malpractice & general liability; nurse practitioner; reg. med. tech.; sr. systems analyst; staff nurse (25).

UMSL: Admissions advisor; announcer; information specialist (2); mgr., constituent relations; instructor, speech communication; asst. prof., economics (2), mass communication, art history, statistics, math, philosophy, geology, political science (2), psychology, social work, sociology; associate director, University Business development center.

UMKC: Mgr., vending services; counselor.

UMR: assistant director, alumni activities; mgr., food services; assoc. prof., computer science; research aide, geological engineering; visiting asst. prof., computer science (3); lecturer, electrical engineering (2), civil engineering (2).

Trumpet-Piano Recital—Steve & Deborah Emery, 8:15 p.m., Jan. 26; UMKC Stover Aud.

Graduate Voice Recital—Jan Welvorn, 8:15 p.m., Jan. 27; UMKC Stover Aud.

Kansas City Wind Quintet—Chamber music series; 8:15 p.m., Jan. 28; KC Unitarian Church

Voice Masterclass—Thilde Beuing; 8:15 p.m., Jan. 30; UMKC Stover Aud.

Esterhazy Quartet—Gervase de Peyer, clarinet; 8:15 p.m., Feb. 2; UMC Fine Arts Recital Hall.

Exhibitions

Koenig paintings/Cicatello sculptures—8 a.m.-5 p.m., through Jan. 18; UMKC Art Gallery.

Urban Photographs—Scott C. Dine; 8 a.m. to 5 p.m., through Jan. 31; UMSL Center for Metropolitan Studies.

Policy clarifies summer pay

The University Cabinet has endorsed a policy on summer teaching loads and pay limitation developed by the Provost Group.

The new policy was written to clarify the payment for teaching during the period from spring commencement to the beginning of the fall term.

Under the policy, which will be included in campus faculty handbooks, the following principles will apply:

No more than two-tenths (2/10) of academic year pay can be provided from the summer instructional budget; within any four-week period, no more than one-tenth (1/10) can be from the instructional budget.

Normally, teaching three credit hours in any four-week period will constitute a full teaching load and would hence be a 1.00 FTE appointment for that period.

Faculty members are, of course, expected to maintain other professional activities and responsibilities while on summer teaching appointments.

Regardless of assignment or source of funds, pay will never exceed three-ninths (3/9) of the academic year pay, except for approved extra compensation.

UM mails W-2 forms

Can't wait to fill out your income tax forms? The University will be mailing out all W-2 forms on or before Jan. 15.

Theatre

All My Sons - and The Imaginary Invalid—Missouri Repertory Theatre, 8 p.m., Feb. 2-26; Danciger Aud, K.C.

Company—7:30 p.m., Feb. 10-18; UMC University Theatre.

Same Time Next Year—MSA Broadway Play Series; 8 p.m., Feb. 22; UMC Jesse Aud.

People

Two UMC scientists will participate in the Fifth International Wheat Genetics Symposium Feb. 23-28 in New Delhi, India. **Gordon Kimber**, professor of agronomy, will serve as chairman of the symposium. Dr. Kimber will present papers on wheat evolution and wheat chromosome behavior. In addition, **Ernest Sears**, USDA Agricultural Research Service agronomist at UMC, will report on his basic wheat research.

LeRoy Hahn, USDA Agricultural Research Service engineer at UMC, has been named "Outstanding Individual of the Year" by the Missouri section of the American Society of Agricultural Engineers. Hahn was cited for his research on environmental conditions which affect livestock.

Ray Pendergrass, director of student financial aids at UMR, has been appointed Missouri's representative to the National Association of Student Financial Aid Administrators Certification Committee.

Wellington B. Stewart, UMC professor of pathology, has been elected president of the Society for Computer Medicine for 1978. **Arthur E. Rikli**, professor of family and community medicine, is former president of the organization. The society was organized in 1971 to provide an interdisciplinary forum on the role of computers in the health care system.

Bookshelf

Editor's note: If you are the author or editor of a recently published book, please provide us with the full particulars for listing in the "Bookshelf" column. We regret that we cannot list articles or papers.

House and Individual: The House Motif in German Literature of the Nineteenth Century, by Naomi Ritter, UMC assistant professor of German. (Pub. by Stuttgarter Arbeiten Zur Germanistik, Akademischer Verlag, Stuttgart, Germany.)

Slide Buyers Guide, ed. by Nancy DeLaurier, curator of slides and photographs, UMKC art and art history department. A compendium of information on art slide sources. (Pub. by College Art Association of America, New York.)

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