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REPORT

Fall 1960

# FROM YOUR UNIVERSITY OF MINNESOTA

Through Education And Research, Waseca School And Station Are

## SERVING SOUTHERN MINNESOTA

**E**IGHTY MILES SOUTH of the Twin Cities, in the heart of the sweet corn and green pea area, is the town of Waseca. Here, at the southwest limits of this county seat town, are the University's Southern School and Experiment Station which serve the rich farmland of southern Minnesota from the hills and valleys of the east to the prairie lands of the west.

The Experiment Station is the southern link in the chain of University experiment stations located strategically throughout Minnesota. As such, it carries on a broad program of research in cooperation with other departments of the Institute of Agriculture on the St. Paul Campus.

The 600-acre Station with its approximately 32,000 experimental plots, 1,000 head of livestock, barns, service buildings, and equipment, is attractive to visitors. The grounds and buildings are kept orderly and clean; all the equipment needed for efficient farming is present; and the latest in scientific development is under test.

In describing the Station's operations, Deane A. Turner, superintendent of the School and Station, stressed the related importance of research, demonstration, education, and application. "But," he added, "like farmers and others engaged in research, we must make adjustments to new developments and techniques of operation."

The rotation of crops to maintain uniform soil fertility is important in experimental work. One experimental

plot at Waseca, however, has been planted to sugar beets continuously since 1941. This experiment has resulted in the development of disease-resistant sugar beets. Developing disease-resistant corn, soybeans, and small-grains is an equally important part of the Station's work and, like research in livestock, is done cooperatively by departments within the Institute of Agriculture.

The seed varieties produced at Waseca are marketed through the Minnesota Crop Improvement Association. The University cooperates with universities in neighboring states in distributing the seeds so that no one state has a monopoly on a particular variety. One year, Iowa may develop a new variety and a certain percentage of the seed is sold in Minnesota. Then when Minnesota develops a new variety, a percentage is sold in Iowa.

At the east boundary of the Experiment Station is a long, low, multi-wing building which houses the Southern School of Agriculture. The School was dedicated in 1953 and since that time has rendered outstanding service to southern Minnesota agricultural and rural education. Like all Schools of Agriculture, it is a four-year school operating on an accelerated schedule from October 1 to April 1. Thus, students, the vast majority of whom are from farm families, are available for work at

Locations of plots are marked on this giant map of the Experiment Station. Pictured are Assistant Professors Harold C. Matson, Boyd C. Fuller, and Kenneth P. Miller.

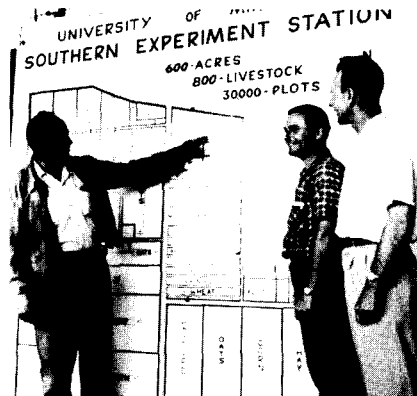
home during the important spring planting and fall harvesting seasons.

The School curriculum, which meets the academic requirements for a secondary diploma, also offers special training in agriculture, home economics, and business. School officials are proud of their students' records, pointing out that over 30 per cent of their graduates go on to college and major in various professional fields.

By attending classes from 8 a.m. to 5 p.m., School of Agriculture students spend approximately the same amount of time in class as do other secondary students. Students reside in dormitories and board at the School.

During the six months when school is not in session, students work on special projects ranging from home improvement by the girls to farm management practices by the boys.

Last year 225 students were enrolled at the Waseca School with the dormitories filled to capacity. Each year the School has far more applicants than it can accept.



**A** COLLECTION OF VALUABLE paintings which honors a tradition of greatness in Minnesota history; hospitals where the afflicted may find hope and comfort; and melodic bells which bring beauty into the lives of University staff members and students—these are among the many valuable gifts which have been presented to the University by individuals and organizations.

These gifts, which reflect the donors' magnanimity as well as their varied interests and personalities, substantially augment the University's teaching, research, and service programs. How does the University say "thank you" to those who thus demonstrate their confidence in, and support of, the University?

Presentation of the Regents Award, consisting of a gold medal and citation, is one way the University may express its gratitude and appreciation and give special recognition to the qualities of benefaction, fidelity, and leadership.

A total of 10 benefactors have received the Regents Award, and in each case, the University has made the presentation an occasion of special meaning and significance to the individual donor.

"Mr. University"—*Gerald T. Mullin*—was the first to receive the Regents Award. A generous and dynamic individual, his many years of service in the state Legislature—first as representative and then as senator—testify to his dedication to higher education and to his abiding concern for the welfare of all Minnesota citizens. For many years he served as chairman of the Senate University Committee and he became a major spokesman for, and advocate of, the University.

The Regents Award was presented to Mr. Mullin at a dinner in Coffman Memorial Union in December, 1957. His family and friends and associates from the University, the Legislature, the community, and his alma mater, the College of St. Thomas, were present when the University paid tribute to Mr. Mullin's many accomplishments and said "thank you" for all he had done for the University.

*Donald J. Cowling*, president of Carleton College for 36 years, has left his imprint not only on Carleton College but has influenced the advancement of private liberal arts colleges in the United States as a whole. He has been a dedicated and tireless supporter of the University's Medical Center. He served as chairman of the Committee of Founders of the Mayo Memorial and as chairman of the Executive Committee for the building of the Masonic Memorial Hospital.

Carleton College and the University sponsored a dinner honoring Dr. Cowling in December, 1958, to which his family and friends and associates from throughout the state were invited. Highlight of the dinner was the presentation of the Regents Award to Dr. Cowling.

A small delegation of Regents and University officials visited *Earle Brown* at his farm in Brooklyn Center to

# THE REGE

## Benefaction

honor him with the Regents Award. Former sheriff of Hennepin County and a longtime friend and supporter of the University, Mr. Brown has devoted a lifetime of service to his state. An ardent advocate of efficient methods in scientific agriculture, he has deeded his farm of 750 acres to the University. Funds from the sale of this land will go for construction of the Earle Brown Short Course Center on the St. Paul Campus.

Over 35,000 people witnessed the presentation of the Regents Award to the *Minnesota Department of the American Legion and its Auxiliary*. Presentation of the Award, which was made to coincide with the American Legion national convention held at Minneapolis in August, 1959, immediately preceded the Senior Drum and Bugle Corps Finals and Parade of Champions in Memorial Stadium.

Members of the American Legion posts and their auxiliaries throughout Minnesota raised \$500,000 to establish the American Legion Memorial Heart Research Professorship as a memorial to the Minnesota men and women who served their country in both world wars.

In specially equipped laboratories on the fourth floor of the Variety Club Heart Hospital, Dr. Robert A. Good, American Legion Memorial Heart Research Professor, studies the causes, prevention, and treatment of rheumatic fever and heart diseases.

*The Veterans of Foreign Wars and the Ladies Auxiliary, Department of Minnesota*, received the Regents Award at a dinner in Coffman Union following the dedication of the VFW Cancer Research Center in the fall of 1959. The Minnesota VFW posts and their auxiliaries raised over \$316,000 toward the construction of the Center and gave over \$14,130 toward purchase of equipment.

The dedication ceremony and dinner, held in conjunction with the Department's Fall Conference, were attended by over 500 members of VFW posts and their auxiliaries.

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# THE NEEDS

of the

## University of Minnesota

THE LEGISLATIVE REQUEST

1961-1962

1962-1963

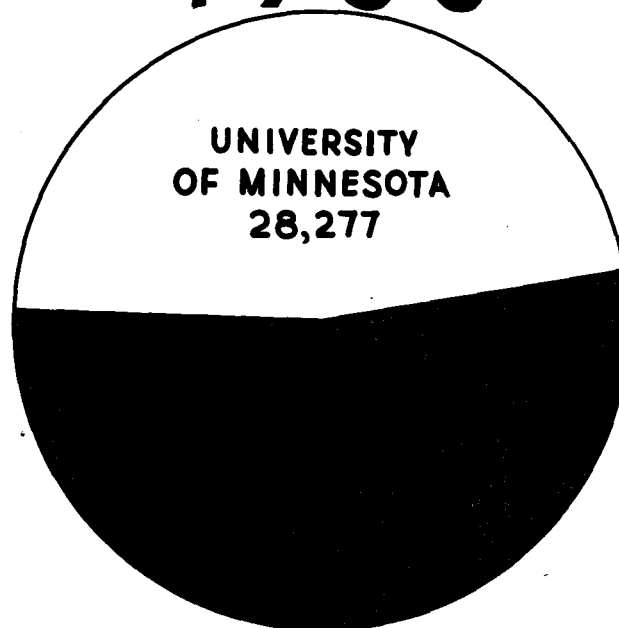
1960

**Higher Education**

**In Minnesota:**

**Where The Load Is**

**Being Carried**

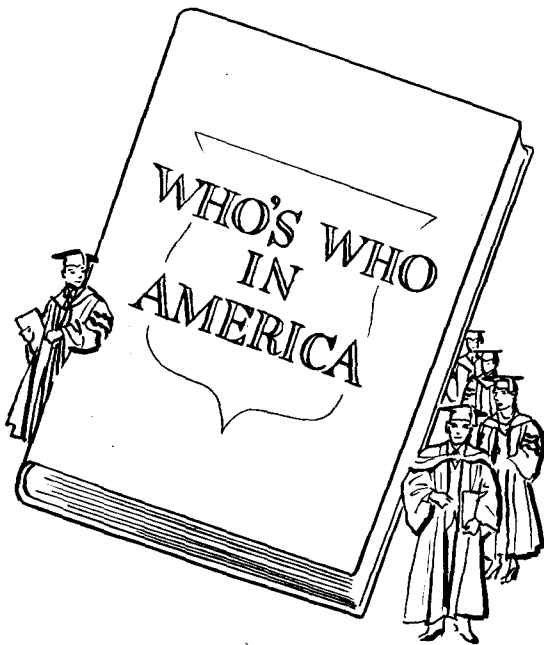


**I**N THE FALL OF 1960, the University enrollment was 28,277; the private colleges enrolled 17,223, the state colleges 10,943, and the junior colleges 3,416.

It's easy to see that the heaviest part of the total load in higher education in Minnesota is concentrated at the University. Moreover, these University students are not all undergraduates in liberal arts fields. Many are in the professional colleges such as law, business, agriculture, pharmacy, and engineering. Many others are at the most advanced and complex level of instruction — medicine, veterinary medicine, and the graduate school.

*Indeed, the State relies almost 100% on the University in providing the expensive, advanced instruction in the professions and graduate training.*

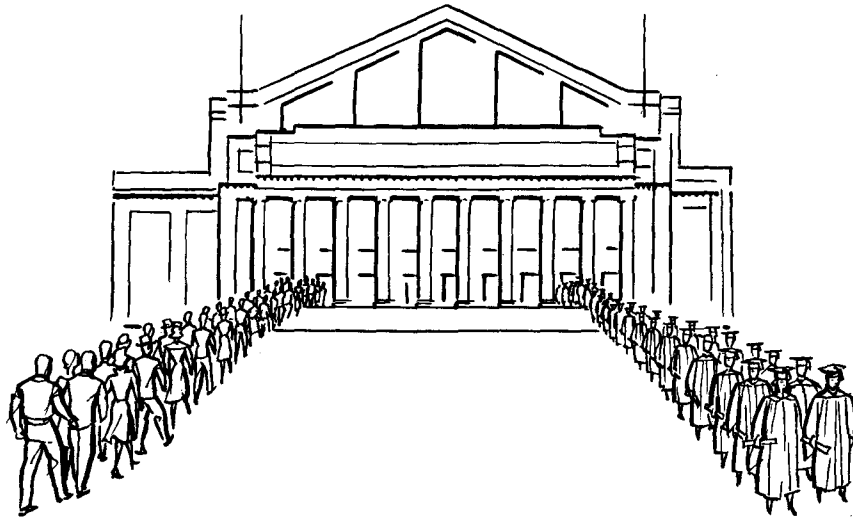
## A GREAT STATE: A GREAT UNIVERSITY



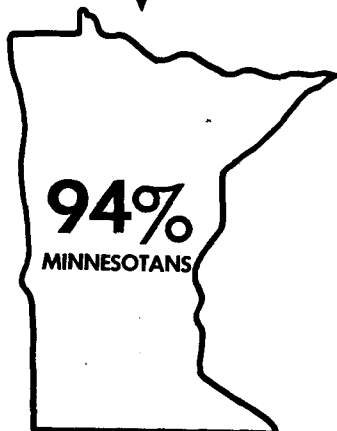
The University of Minnesota ranks among the great and distinguished universities of this country. It is outstanding in teaching, research, and public service. A measure of its distinction is reflected in the fact that 411 of its staff members are listed in *Who's Who in America*. Included are some of America's most distinguished heart and stomach surgeons, plant pathologists, geneticists, cosmic ray physicists, political scientists, economists—all respected by their students and by fellow scientists and scholars the whole world over.

## OPPORTUNITY AND SERVICE

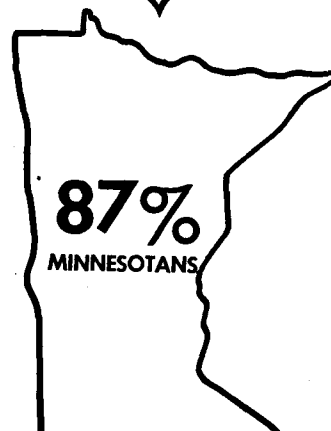
The University represents opportunity for young people of Minnesota who wish a liberal education, a professional career, or graduate training. It is to the University that Minnesota communities, industries, and professions turn for their lawyers, accountants, engineers, pharmacists, veterinarians, college professors and teachers, librarians, physicists, doctors, social workers, architects, home economists, scientists, journalists, statisticians, to name some.



THIS MANY OF THE UNDERGRADUATES AT THE UNIVERSITY COME FROM MINNESOTA HOMES.



THIS MANY OF ALL STUDENTS AT THE UNIVERSITY, INCLUDING GRADUATE STUDENTS AND PROFESSIONAL STUDENTS, COME FROM MINNESOTA HOMES.



# The University Is State-Wide

## TEACHING

THE UNIVERSITY'S *TEACHING* PROGRAMS go far beyond the campuses of the University and help people through

*night classes • special seminars • professional institutes • television instruction • agricultural extension agents • the radio school of the air • correspondence courses • short courses*

Do you want to know the number of people who signed up for some kind of University instruction last year?

# 87,596

## RESEARCH

THE UNIVERSITY'S *RESEARCH* PROGRAMS go far beyond the campuses to affect people all over the State through research in

*brucellosis • dairy processes • blue cheese • electronics • wild life conservation • cosmic rays • plant pathology • child development • open-heart surgery • taconite*

AND WE'VE NAMED ONLY A FEW!

## SERVICE

THE UNIVERSITY'S *SERVICE* PROGRAMS go far beyond the campuses to help people in Minnesota through

*cancer detection • pollen counts • educational film rental • state-wide high school testing program • identification of plants and insects • community health and recreational advice • animal disease diagnosis • school surveys • concerts and lectures • soil testing*

AND THERE ARE MANY MORE!

## AND MINNESOTANS KNOW

MINNESOTANS HAVE TAKEN justifiable pride in the accomplishments of their sons and daughters who have studied at the University; they have appropriately shared the fame that has come to the State from the University's laboratories, playing fields, classrooms, and research facilities; they have asked — and they have received — assistance from the University in many ways and on many occasions.

And the University has an equal pride in Minnesota and in Minnesotans. It has been the beneficiary of staunch citizens who, in countless ways, have contributed their time and their resources as measures of their faith in its objectives and needs. The partnerships that have developed with Minnesotans and their associations and organizations are deep and enduring ones from which each partner draws strength and satisfaction. And all of these mutual understandings and arrangements provide the natural soil in which a great University can develop and flourish.



A listing (in the picture frame below) of some of the more publicized units and activities of the University will give meaning to the foregoing and will rekindle the memories of widely differing groups of citizens who are united in their friendly relationships to the University.

THE VARIETY CLUB HEART HOSPITAL. THE ST. ANTHONY FALLS HYDRAULIC LABORATORY. THE JAMES FORD BELL COLLECTION. THE LABORATORY OF PHYSIOLOGICAL HYGIENE. THE MAYO MEMORIAL BUILDING. THE VETERANS OF FOREIGN WARS CANCER RESEARCH CENTER. THE LINEAR ACCELERATOR. THE MINNESOTA MUSEUM OF NATURAL HISTORY. THE UNIVERSITY ARTISTS COURSE. THE FOREST EXPERIMENT STATION IN CLOUQUET. THE MUNICIPAL REFERENCE BUREAU. THE MASONIC MEMORIAL HOSPITAL. THE AMES LIBRARY OF SOUTHEAST ASIA. THE GAMMA RAY FACILITY. THE GOLDEN GOPHERS. THE NUMERICAL ANALYSIS CENTER. THE 4-H CLUBS EVERYWHERE. THE ARMY, NAVY, AND AIR FORCE R.O.T.C. UNITS. THE HORMEL INSTITUTE IN AUSTIN. THE MAYO FOUNDATION IN ROCHESTER. THE ROSEMOUNT AERONAUTICAL LABORATORIES IN ROSEMOUNT. THE FORESTRY AND BIOLOGICAL STATION AT LAKE ITASCA. THE MINNESOTA CENTENNIAL SHOWBOAT UP AND DOWN THE MISSISSIPPI RIVER. THE UNIVERSITY OF MINNESOTA PRESS. THE AMERICAN LEGION MEMORIAL RESEARCH PROFESSORSHIP. THE MINNESOTA GEOLOGICAL SURVEY. THE FRUIT BREEDING FARM AND ARBORETUM IN EXCELSIOR. THE CEDAR CREEK NATURAL HISTORY AREA NEAR BETHEL. THE AGRICULTURAL EXPERIMENT STATIONS IN DULUTH, MORRIS, CROOKSTON, GRAND RAPIDS, WASECA, AND LAMBERTON. THE ANIMAL DIAGNOSTIC AND RESEARCH LABORATORY. THE METROPOLITAN OPERA. THE SCHOLARSHIPS AND GRANTS FROM TRADE UNIONS, BUSINESS CORPORATIONS, PROFESSIONAL AND OTHER GROUPS AND ASSOCIATIONS, AND INDIVIDUALS. THE NEW DULUTH CAMPUS. THE EVEN NEWER MORRIS CAMPUS. THE CENTER FOR CONTINUATION STUDY. THE TWEED GALLERY.

UNIVERSITY OF MINNESOTA



# Now, Let's Look Ahead

The University's programs in teaching, in research, and in service have been built over the years. This process cannot stop now, because:

*As the State grows, the University MUST grow; as the University grows, the State WILL grow.*

## What about 1970?

Estimates of student enrollment in Minnesota colleges and the University in 1970 are:

- *the junior colleges, 5,700*
- *the private colleges, 24,300*
- *the state colleges, 21,800*
- *the University of Minnesota, 47,000*

**The load in the past, at the present, and in the future, is heaviest at the University of Minnesota.**

**To meet the load calls for business-like planning and budgeting.**



## GETTING AND HOLDING A FACULTY

A University can be no better than its faculty. A basic premise in determining the University's needs is that faculty salaries must be maintained *and improved*. Minnesota salaries can be compared with averages at other com-

parable universities. At these institutions fringe benefits are more and more becoming a part of the total salary picture, and when these benefits are taken into account, the University of Minnesota is in an even more disadvantageous position.

### Average Cash Salaries, Plus Fringe Benefits 1960-61

Minnesota Compared to Ten Other Leading Universities\*

Professors - - - - -	4 institutions exceed Minnesota
Associate Professors - - - - -	7 institutions exceed Minnesota
Assistant Professors - - - - -	7 institutions exceed Minnesota
Instructors - - - - -	9 institutions exceed Minnesota

\*Wisconsin, Purdue, Indiana, Illinois, Ohio State, Iowa, Northwestern, Michigan, Michigan State, California

A SURVEY OF COMPARABLE NEIGHBORING STATE UNIVERSITIES REVEALS THAT THEY ARE ASKING THEIR LEGISLATURES FOR BIENNIAL INCREASES AVERAGING 20.4% OF THEIR ACADEMIC STAFF PAYROLL FOR SALARY ADJUSTMENTS.



MINNESOTA IS ASKING FOR AN 8% INCREASE EACH YEAR OF THE BIENNIUM, OF WHICH IT IS PROPOSED TO USE 3% EACH YEAR FOR FRINGE BENEFITS.



It is not only in comparison with other universities that the University of Minnesota is at a disadvantage. Compared to beginning salaries and fringe benefits in local industry and business, the University also faces an increasingly serious problem in recruiting and holding faculty members.

*A University of Minnesota instructor receives an average of \$639 a month, with 3% fringe benefits. A new Ph.D. graduate can start in a local industry at \$844 a month, with 20% fringe benefits.*

**Such adverse situations must be corrected, and the proposed University budget seeks to improve cash salaries and fringe benefits.**



# THREE BUDGETARY PRINCIPLES

To do its job, the University has to plan ahead, and just as in business, planning requires the application of definite *budgetary principles*. Three such principles are introduced into the legislative request for 1961-63. These will serve also in future years. They are:

## The First Principle

### STUDENT-FACULTY RATIO

As a teaching institution, the University offers instruction at many levels:

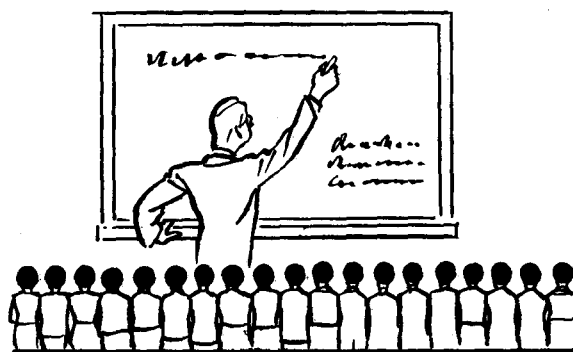
- *It instructs students at the undergraduate level, with emphasis on general, pre-professional education.*
- *It trains in technical-professional fields, where instruction is more complex and the demands upon the teachers are greater.*
- *It offers education in medicine and veterinary medicine, and at the level of graduate and research instruction — the most complex and specialized of all.*

But *Teachers* do it all. How many teachers do we need? First, we estimate the numbers of students and what they will study, and then we apply student-faculty ratios that reflect the several levels and the complexity of teaching that the University must do.

## Undergraduate and Pre-professional 19 to 1

At the general undergraduate and pre-professional levels, faculty needs are based on the student-faculty ratio already accepted by the Legislature for the state colleges. This is a 19 to 1 ratio: for every 19 students, one faculty member is needed. This ratio is applied to the following colleges:

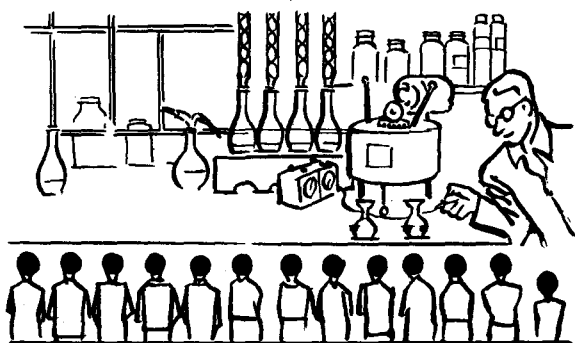
- College of Science, Literature, and the Arts
- College of Education
- University College
- Morris Campus
- Duluth Campus
- General College



## Technical and Professional 12.7 to 1

For the technical and professional schools, the ratio is 12.7 to 1, reflecting the levels and costs of different courses that are required. The following colleges are involved:

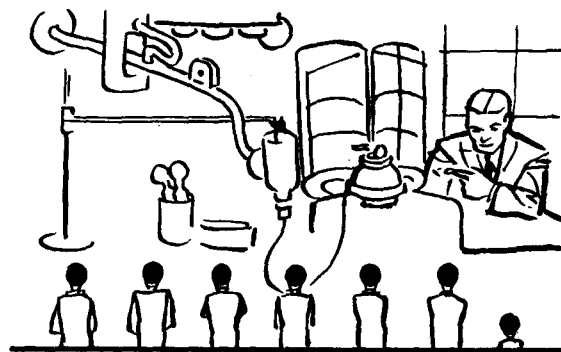
- Institute of Technology
- School of Law
- College of Agriculture, Forestry, and Home Economics
- School of Business Administration
- College of Pharmacy
- School of Dentistry
- College of Medical Sciences (except M.D.)



## Medicine, Veterinary Medicine, and Graduate School 6.3 to 1

For medicine, veterinary medicine, and the graduate school, the ratio is 6.3 to 1 — again, a reflection of the highly specialized needs that must be met in these units of the University. The following are included:

- Medicine in the College of Medical Sciences
- College of Veterinary Medicine
- Graduate School



**FIRST  
WE  
NEED  
141  
TEACHERS**

**Additional academic staff  
needed to catch up**

No college allotments for additional academic staff have been made since 1957, yet between 1957 and 1960 the University has added approximately 2,200 students — equal to twice the student body of many liberal arts colleges. Applying the previously described student-faculty ratios — and thus taking into account the three levels of instruction — the University in the fall of 1960 was understaffed by 424 faculty members. Recognizing that the “catch up” cannot be achieved all at once, it is proposed to spread it over a six-year period. One-third of the number is requested for 1961-63 — or slightly more than one faculty member for each of the 125 teaching departments.

**Additional academic staff  
needed to cover additional  
enrollment, 1961-1963**

Enrollments will increase during the 1961-63 biennium by an estimated 1,650 for the two years. Again, if the student-faculty ratios are applied to this increase, calculated by the three levels of University instruction, 158 additional new positions will be needed to handle the enrollment increases of the biennium.

It's clear that the use of the student-faculty formula provides a systematic and sound manner for calculating needs for faculty, and only by using such a principle can sound planning be undertaken to meet the student loads the University will have to carry.

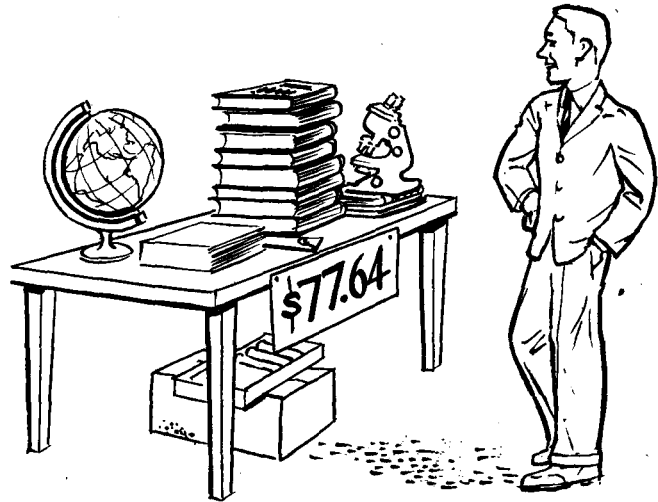
**THEN  
WE  
NEED  
158  
MORE**

# The Second Principle

## PER STUDENT COST

### Supplies, Expenses, and Equipment

To serve additional students, additional supplies, expenses, and equipment will be required. Actual expenditure for these items in 1959-60, divided by the number of students, gives a unit cost of \$77.64. This figure of \$77.64, then, is introduced in applying the principle that enrollment-related supply costs should be met by requests that reflect the changing size of the student body. This is the second principle, and it, too, is important in business-like planning. Related to this second principle is the need for adjusting all expense items to reflect the ups and downs of the price level. (See the *itemized Summary of Increases*, page 15.)

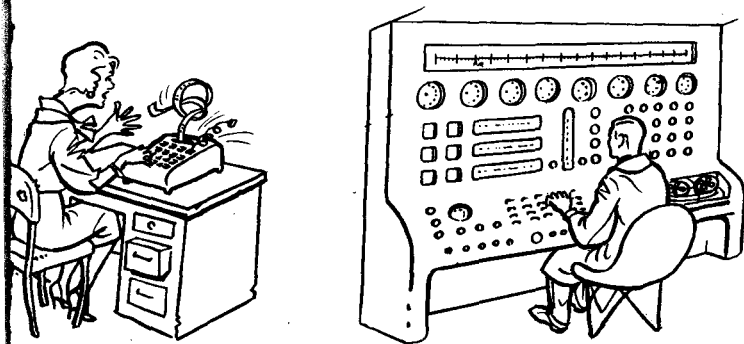


# The Third Principle

## DEPRECIATION BASIS

### Replacement of Equipment

The University budget has not in the past been realistic with respect to replacement of inventory. A practical and continuing equipment replacement is necessary to insure that modern and essential equipment is available for teaching and research, and to offset factors of obsolescence. A depreciation rate of 10% on the equipment inventory is introduced as an over-all average rate. (See the *itemized Summary of Increases*, page 15.)



And these three principles are keys to the University's legislative request for 1961-62 and 1962-63; they are fundamental to this statement of Needs.

# Now, Let's Look at The

## TOTAL

### Maintenance Request

	1961-62	1962-63
For maintenance the University will need .....	\$44,241,273	\$47,467,406
But income such as student tuition, fees collected by clinics, and sales at experiment stations, will be .....	12,332,922	12,619,393
	-----	-----
Thus, the Legislative request for maintenance will be .....	\$31,908,351	\$34,848,013

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**Are these sums adequate?**

**Two Questions:**

**What additions will they provide?**

**The answers are in the table that follows.**



For this academic year, 1960-61, the Legislature appropriated for maintenance \$25,368,689, which means that the University is requesting, for 1961-62, \$6,539,662 more than it had this year and, for 1962-63, \$2,939,662 more than it requests for 1961-62. What will be done with these additional sums? This table, from one of the 138 pages of the "Gray Book", which is one of the principal reports of the University, prepared for the use by committees of the Legislature, provides the answer in summary form.

## SUMMARY OF INCREASES

	INCREASE EACH YEAR OVER PREVIOUS YEAR			
	1961-62		1962-63	
	AMOUNT	%	AMOUNT	%
<b>A. Academic Staff</b>				
1. Salary Improvement .....	\$1,468,406	8.0	\$1,758,614	8.0
2. Additional Staff				
Enrollment Related .....	2,102,958	11.5	630,890	2.9
Programatic Changes .....	56,240	.3		
<b>B. Civil Service Salaries</b>				
1. Salary Adjustments				
Merit Increases .....	351,210	3.7	385,114	3.6
Proposed New State Pay Plan .....	517,499	5.4		
2. Additional Staff				
New Buildings .....	42,940	.4	65,844	.6
Enrollment Increase .....	304,606	3.2	184,728	1.7
<b>C. Mechanics Payroll</b>				
1. Salary Adjustment .....	129,924	8.6	22,260	1.4
<b>D. Other Than Salaries</b>				
1. Equipment (Depreciation basis) .....	801,192	10.0		
2. Price Increase — 5% .....	257,371	3.2		
3. Supplies, Expense and Equipment for Educational units (Unit price method for new students) .....	184,395	2.3	46,584	.4
4. Supplies, Expense and Equipment (Administration and General University, but exclusive of Admissions and Records, Dean of Students and Library) .....	31,751	.4		
5. Physical Plant — operating costs of new buildings .....	158,033	2.0	228,791	2.3
6. OASI-SERA Increases .....	136,453	1.7	133,512	1.4
7. Unemployment Compensation Claims ..	12,345	.2	18,952	.2
8. Computer (25% of total Cost) .....	250,000	3.1	-250,000	-2.5
9. Mines Tax Commission Increase .....	4,173	.1	844	
<b>Total Increases .....</b>	<b>\$6,809,496</b>		<b>\$3,226,133</b>	
<b>E. Less Increase in Estimated Income .....</b>	<b>269,834</b>		<b>286,471</b>	
<b>Net Increase in Request .....</b>	<b>\$6,539,662</b>	<b>25.8</b>	<b>\$2,939,662</b>	<b>9.2</b>

# But Separate—and Additional—Appropriations Are Requested

For:

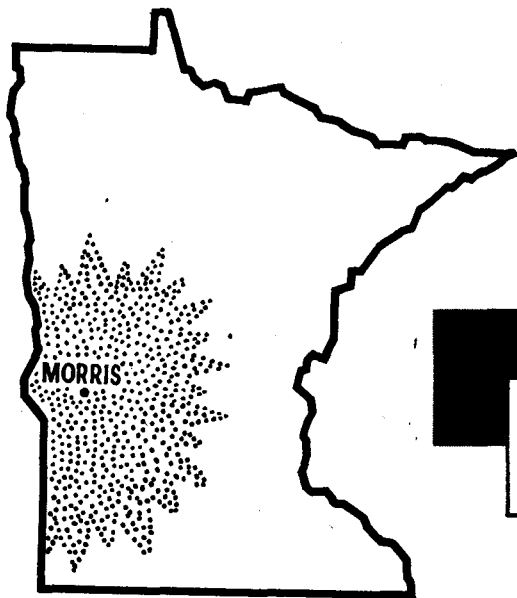
- UNIVERSITY HOSPITALS
- UNIVERSITY OF MINNESOTA, MORRIS
- SPECIAL PROJECTS
- LAND AND BUILDINGS

*Again, for each of these, with the exception of Morris, the tables from the "Gray Book" will be used.*

## UNIVERSITY HOSPITALS

For the support of the University of Minnesota Hospitals, the Psychopathic Hospital, the Child Psychiatric Hospital, the Rehabilitation Center, and the Multiple Sclerosis Clinic, the Legislature appropriated \$4,739,214 for 1960-61. Requests for 1961-62 and 1962-63 (and for a deficiency request of \$100,000 to cover 1960-61) are as follows (from page 61 of the "Gray Book"):

	Appropriation	Request	
	1960-61	1961-62	1962-63
<i>University of Minnesota Hospitals</i>			
From the State .....	\$1,624,622	\$2,142,806	\$2,300,812
From the County .....	1,724,622	2,142,806	2,300,812
Deficiency Request 1960-61 .....	100,000		
<b>Total</b> .....	<b>\$3,449,244</b>	<b>\$4,285,612</b>	<b>\$4,601,624</b>
<i>Psychopathic Hospital</i> .....	614,137	718,473	761,990
<i>Child Psychiatric Hospital</i> .....	241,984	273,778	283,611
<i>Rehabilitation Center</i> .....	399,706	496,544	515,493
<i>Multiple Sclerosis Clinic</i> .....	34,143	52,888	57,865
<b>Total</b> .....	<b>\$4,739,214</b>	<b>\$5,827,295</b>	<b>\$6,220,583</b>
<i>Summary by Source</i>			
From the State .....	\$3,014,592	\$3,684,489	\$3,919,771
From the County .....	1,724,622	2,142,806	2,300,812
<b>Total</b> .....	<b>\$4,739,214</b>	<b>\$5,827,295</b>	<b>\$6,220,583</b>



## UNIVERSITY OF MINNESOTA, MORRIS

1961-62 \$223,130

1962-63 \$355,991

The biennial needs of the University of Minnesota, Morris, are presented separately rather than in the general maintenance request.

Morris began its collegiate program in the fall of 1960, with 238 freshmen enrolled. This was possible, in part, because of the enthusiasm and generosity of the citizens of that region. (They made gifts totaling over \$50,000.) The existing physical plant (The University's West Central School of Agriculture with a cost of reproduction approximately \$5,500,000) at Morris is being utilized for instruction and housing. Continuation of the Morris collegiate program will require during the biennium the opening of a sophomore class in the fall of 1961 and a junior class in 1962. The Morris budget for 1960-61 was \$124,013. For 1961-62 the request is for \$223,130, and for 1962-63, for \$355,991. Experience of the first year shows that a need for higher education in west central Minnesota is being met and that an existing plant is being utilized. A carefully selected, able student body drawn from 21 Minnesota counties is being served.

The continuation and development of the University of Minnesota, Morris, is recommended in the report of the Liaison Committee on Higher Education in Minnesota.

## SPECIAL PROJECTS

The University conducts various special projects for the general benefit of the State and its citizens at the specific request of the Legislature. The following tabulation (page 60 of the "Gray Book") shows (1) the Legislative appropriations for 1960-61 to cover these special projects, and the requests (2) for 1961-62, and (3) for 1962-63:

<i>Fund Name</i>	(1) Appropriation 1960-61	(2) Legislative Request 1961-62	(3) Legislative Request 1962-63
Agricultural Extension Service .....	\$ 670,554	\$ 785,918	\$ 852,529
Experiments in the Benefication of Manganiferous and Low Grade Ores and for Experiments in the Direct Process Benefication of Low Grade Ores — General Experiments .....	50,000	64,080	66,554
General Agricultural Research .....	470,000	656,771	682,875
Medical and Cancer Research .....	83,000	100,000	100,000
Livestock Sanitary Board Laboratory .....	68,000	110,000	114,315
Institute of Child Welfare .....	36,000	43,108	46,080
General Research .....	104,600	125,000	125,000
Minnesota Institute of Research .....	34,000	52,382	54,017
Agricultural Research — Rosemount .....	105,000	138,311	142,773
Hybrid Corn Maturity Tests (*) .....	(12,500)	(18,980)	(19,532)
Tuition and Transportation Aid for Students of Agricultural Schools .....	65,000	52,000	50,000
Business and Economic Research .....	35,000	52,699	55,193
Training Project in Delinquency Control .....	9,500	17,762	18,583
Hardwood Timber Species Research Fund .....	6,000	7,430	7,803
Psychiatric Research Fund .....	40,000	63,191	81,125
Training of Laboratory Aides .....	11,000	13,280	13,943
Special Education Training and Research Program .....	40,000	51,178	53,987
Legume Seed Research Fund .....	37,000	47,824	49,652
Industrial Relations Education Program .....	40,000	60,467	62,743
Experiments in the Benefication of Manganiferous and Low Grade Ores and for Experiments in the Direct Process Benefication of Low Grade Ores — Experiments with Emphasis on Ores of the Cuyuna Range .....	100,000	108,148	111,237
Maintenance of the Southwest Agricultural Experiment Station .....	40,000	56,112	61,239
Special Assessments — Duluth Branch .....		8,868	
Special Assessments — Minneapolis .....		1,583	
	\$2,044,654	\$2,616,112	\$2,749,648

(\*) Not included in Totals as this is a transfer of an appropriation from the Minnesota Department of Agriculture.

## LAND AND BUILDINGS

To repeat: the present, 1960-61, enrollment of the University is 28,277. To repeat again: in 1970, which is only a decade away, the University's enrollment will be 47,000. Obviously, this expansion of the student body requires more than just an expansion in the number of teachers and in the amount of supplies and equipment. Already the University campuses, like the State and the Nation, are "bursting at the seams"; new buildings in which to do the job and new land on which to put them must be provided.

But Minnesota, in its cities and in its school

districts, has faced this problem — and faced it squarely — in the expansion of the number and of the size of elementary and high schools. There must be parallel expansion at the University level.

The University has worked carefully and prudently with the Legislative Interim Commission on Buildings in estimating its land and building needs for each of the next several sessions of the Legislature. The requests for the next biennium for buildings and for land are itemized as they appear in the last pages of the "Gray Book".



# SUMMARY BY CAMPUS

## I. MINNEAPOLIS CAMPUS

### NEW BUILDINGS

Science Classroom Building, East Campus .....	\$ 1,260,000
Library facilities and study room, West Campus .....	3,493,000
General purpose classroom facilities and SLA staff offices, West Campus .....	2,005,000
Physics Addition, North wing .....	1,036,000
Electrical Engineering addition, 4th floor .....	330,000
Addition to Minnesota Museum of Natural History (to match gifts) .....	280,000

### REMODELING AND REHABILITATION

Rehabilitation of Chemistry, phase four .....	200,000
Rehabilitation and remodeling of the library, phase two .....	275,500
Rehabilitation of University Hospitals .....	275,000
Rehabilitation and remodeling of Jackson Hall, phase three .....	300,000
Replacement of boiler and auxiliaries — heating plant .....	1,030,000
Rehabilitation of Main Engineering .....	150,000
Rehabilitation of Electrical Engineering .....	70,000
Rehabilitation and remodeling of Nicholson Hall .....	276,000
Rehabilitation in Burton Hall (completion) and installation of elevator .....	85,000
Rehabilitation and remodeling of Wulling Hall — additional .....	100,000
Installation of additional elevator, Mayo Building .....	117,000
Installation of an elevator, Continuation Study Center .....	75,000
Rehabilitation and remodeling and equipment for South Section, Experimental Engineering .....	260,000

### LAND NEEDS

Land acquisition, 2.2 acres along south side of 4th Street, S.E., between 17th and 19th Avenues .....	494,300
Land acquisition, 2.5 acres on West Campus .....	275,000
Land for Dental and Medical School Expansion (in block opposite Millard Hall) .....	150,000

### FOOD SERVICE NEEDS

Food Service — Student Center Building on West Campus .....	500,000
---	---------

### SUB-TOTAL

\$13,036,800

## II. ST. PAUL CAMPUS

### NEW BUILDINGS

Agricultural Economics and Classroom Building .....	\$ 896,000
Addition to Snyder Hall for Agricultural Biochemistry .....	862,000
Completion of Forest Products Laboratory .....	250,000
Additional two floors to Veterinary Medicine Building .....	616,000
Completion of Veterinary Diagnostic and Research Laboratory .....	325,000
Completion of basement in Veterinary Basic Science Building .....	75,000

### REHABILITATION, REMODELING, UTILITIES, ETC.

Utilities, storm sewers, sanitary sewers, water mains .....	168,000
New heating tunnel, including piping .....	276,000
Elevators (Pathology & Agronomy) .....	56,000
Heating Plant (new boiler and auxiliaries) .....	490,000
Rehabilitation and remodeling Home Economics Building .....	141,000
Rehabilitation and remodeling Green Hall .....	90,000

**SUB-TOTAL** \$ 4,245,000

## III. DULUTH CAMPUS

### NEW BUILDINGS

Humanities Building Addition .....	\$ 505,000
Physical Plant Shops & Garage .....	448,000
Home Economics — Classroom Building .....	896,000

### OTHER NEEDS AND UTILITIES

Heating Plant coal storage & handling facilities .....	200,000
Study Hall and reading room facilities .....	179,000
Elevators — Humanities & Tweed Gallery .....	56,000
Move and establish Darling Observatory & Planetarium on Rock Hill .....	90,000
Campus drainage .....	50,000
General landscaping and campus improvement .....	53,000
Development of arboretum and Rock Hill .....	20,000

### HOUSING NEEDS

For 96 single students (25% of Cost) .....	121,000
--	---------

### LAND NEEDS

For consolidation of campus .....	45,000
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**SUB-TOTAL** \$ 2,663,000

## IV. MORRIS CAMPUS

Rehabilitation of street lighting system .....	\$ 22,500
Rehabilitation of Senior Hall .....	83,000
Rehabilitation of Gymnasium .....	22,500
Pavement, curbs, gutters on main roads .....	67,000
Rehabilitation of Dining Hall .....	83,000
Remodeling & rehabilitation of Girls' Dormitory .....	62,000
Science Building — 1st unit .....	600,000

**SUB-TOTAL** \$ 940,000

## V. SCHOOLS OF AGRICULTURE AND EXPERIMENTAL STATIONS

### A. CROOKSTON CAMPUS

Farm machinery and motor vehicle maintenance building .....	\$	20,000
Dairy Barn rehabilitation and high moisture feed storage (silo) and Dairy Barn addition .....		30,000
Tunnel draining and pipe insulation .....		15,000
Street lighting system .....		15,000
Surfacing of roads and repair of curbs .....		30,000
Land acquisition for feed crops .....		35,000
Rehabilitation of Stephens Hall .....		225,000
Addition to Pure Seed Building .....		5,000
Addition to Beef Feeding Shed .....		7,000
<b>SUB-TOTAL</b>	<b>\$</b>	<b>382,000</b>

### B. WASECA CAMPUS

Hog House addition .....	\$	10,000
Research Silo and equipment .....		10,000
Remodel Classroom — Science Laboratory .....		5,000
<b>SUB-TOTAL</b>	<b>\$</b>	<b>25,000</b>

### C. GRAND RAPIDS STATION

#### NEW BUILDINGS

Auditorium and gymnasium building .....	\$	200,000
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#### REMODELING AND REHABILITATION

Complete road surfacing project .....	\$	25,000
Remodel and addition to milkhouse .....		7,500
<b>SUB-TOTAL</b>	<b>\$</b>	<b>232,500</b>

### D. ROSEMOUNT

Single family 2-bedroom cottage .....	\$	13,440
Turkey brooder and laying house .....		22,400
Beef Cattle Barn .....		14,400
Foundation Seed Storage & Cleaning Building .....		11,200
Sheep Barn — pole-type construction .....		11,200
Feed Storage facilities on Beef Farm .....		8,500
<b>SUB-TOTAL</b>	<b>\$</b>	<b>81,140</b>

### E. NORTHEAST EXPERIMENT STATION

Garage at Superintendent's residence .....	\$	1,200
Machine shed 156' x 42' (including scale) .....		13,000
Hay and straw storage research building .....		3,000
<b>SUB-TOTAL</b>	<b>\$</b>	<b>17,200</b>



## F. CLOQUET STATION

### NEW BUILDINGS

Central student washroom shower, toilet, laundry building .....	\$ 20,000
New classroom building .....	30,000

### REMODELING AND REHABILITATION

Remodel Office and Laboratory Building .....	20,000
Surface roads and rebuild front entrance .....	6,000

**SUB-TOTAL** \$ 76,000

## G. ITASCA STATION

### NEW BUILDINGS

Laboratory for Botany .....	\$ 7,000
Bathhouse and laundry facilities for family units and camp ground occupants .....	8,000

### REMODELING AND REHABILITATION

Oil and surface roads .....	2,000
-----------------------------	-------

**SUB-TOTAL** \$ 17,000

## H. EXCELSIOR STATION

Utility and operations building .....	\$ 8,000
Machine storage and operations building .....	8,000

**SUB-TOTAL** \$ 16,000

**GRAND TOTAL** \$21,731,640

## This, Then, Is the Request

of the University of Minnesota which is made to the people of the State through their elected representatives in the Legislature for the two years of the biennium 1961-63. These years will be important years in the history of the State, and of the University. Before the biennium begins, a new President of the University will be inaugurated. And, during the biennium, in the academic year 1961-62, the University will join all the other Land-Grant colleges and universities in the nation-wide observance of the Land-Grant Centennial, commemorating the 100 years of progress in American higher education since President Lincoln signed into law the Land-Grant Act, which provided for the establishment and support of institutions of higher learning of and for the people.

President Lincoln had a vision of greatness for America; the founders of the State and of the University had a vision of greatness, too. The promise is now, and is continuously, being fulfilled. But the continuance of this greatness rests squarely with the people of the State, and with their elected representatives.

**As the State grows, the University must grow;  
As the University grows, the State will grow.**



This Statement of Needs of the University of Minnesota is being sent to alumni, parents, staff members, community and state leaders, and friends of the University. In the interest of economy, duplicates have not been eliminated, and it may be that you will receive more than one copy. If you do, will you please give the extra copy to someone who should know about the University and its needs?

Permission is given to reproduce any portions of this publication.

Additional copies may be obtained from the Department of University Relations, 213 Administration Building, Minneapolis 14, Minnesota.

# S AWARD

## Leadership

Copies of the Award were included in the dinner programs.

This fall, with all equipment installed and all laboratories in operation, VFW statewide cancer committee members were invited to campus for a complete guided tour of the Center.

*H. Rowatt Brown*, a neighbor to the University and a man deeply sensitive to beauty, presented the electronic bells to the University which each week day mark the class hours and ring from the roof of Northrop in a half-hour evening concert.

Two dedication concerts on the Carillon Americana, the latest gift of electronic bells from Mr. Brown, marked the presentation of the Regents Award to Mr. Brown. The Award was given at a small dinner party on campus attended by Mr. Brown's family and close friends. That evening, Robert Carwithen, noted organist and carillonneur, presented a concert on the organ and Carillon Americana. An afternoon concert was given by Helen Garvey, University carillonneur.

The Variety Club Heart Hospital, the first hospital in the United States devoted exclusively to the treatment and study of heart disease, was built with funds raised by the *Variety Club of the Northwest*. Formal dedication of the building in 1951 brought noted motion picture personalities to the campus.

Originally a four-story building, the Club raised funds for a fifth floor, named the Arthur W. Anderson Floor in honor of the chief barker who spearheaded early Hospital construction plans.

At a dinner in the Campus Club in January, 1960, the Regents Award was given to the Variety Club of the Northwest. A copy of the Award, enclosed in the dinner program, was given to each guest. Following talks by University doctors, the guests toured the Hospital.

*The Masons of Minnesota* were given the Regents Award at a luncheon this fall in Coffman Union to which more than 600 Masons, representing lodges and chapters

throughout Minnesota, were invited. The Award cited the Masons for their gift of the entire \$1 million needed for the construction of the Masonic Memorial Hospital. The Hospital is dedicated to patient care, teaching, and research.

A large dinner program, enclosing a facsimile of the Regents Award citation, was presented to each luncheon guest. In addition, a copy of the Award was sent to each of Minnesota's 564 Masonic lodges and Eastern Star chapters where it can be framed and placed on the wall.

Prior to the luncheon, guests visited the Hospital where they met with staff doctors who described the work being done.

The James Ford Bell Room in the Walter Library was the setting for the presentation of the Regents Award to the man in whose honor the Room was named. *James Ford Bell*, Regent of the University for 21 years, was honored by his fellow Regents in a surprise ceremony following their October 15 meeting.

A man who looks forward to change and progress, but one who also seeks to preserve that which is valuable from the past, he has collected rare books on exploration and trade from the Renaissance period and presented them to the University, where they are housed in a vault adjoining the James Ford Bell Room.

An avid sportsman and dedicated conservationist, he contributed to the construction of the Minnesota Museum of Natural History. Regent Bell's own hunting expeditions furnished the Dalls Sheep from Alaska and Woodland Caribou from Newfoundland for two of the Museum's major exhibits. He has financed several other major exhibits as well as contributed funds for the Museum's operating expenses.

A special "Regents Award Exhibition" of paintings from the George P. Tweed Memorial Art Collection marked the presentation of the Regents Award to *Mrs. Alice Tweed Tuohy* on October 20. The Collection was given to the University by Mrs. Tuohy as a living memorial to her late husband, one of Minnesota's leading industrialists and financiers. A former resident of Duluth who now makes her home in California, Mrs. Tuohy also gave her home to the University and contributed to the construction of the Tweed Gallery on the Duluth Campus, the permanent home of the Tweed Collection.

A special program, designed for the exhibition, listed the titles and artists of the paintings exhibited and displayed a copy of the Regents Award citation.

Recipients of the Regents Award are recommended to the Board of Regents by a special Regents Award Committee and then voted upon by the Board. Members of the Regents Award Committee are Regent Marjorie J. Howard (Mrs. C. Edward), chairman; William L. Nunn, director of University Relations, secretary; Laurence R. Lunden, vice president for business administration; Malcolm M. Willey, vice president for academic administration; and Raymond W. Darland, provost of UMD.

# Blue Cross And Blue Shield To Conduct Special Enrollment

**A** SPECIAL ENROLLMENT in the supplemental Blue Cross and Blue Shield health care program for all University students will be conducted January 3 through January 6. Enrollment has been reopened to accommodate a considerable number of students who applied for membership after the October deadline.

Cost of the supplemental health care plan for single students is \$15.90 for coverage from January 1, 1961 to October 1, 1961. The family rate for the same coverage period is \$87.70. Those students making application for family coverage may pay quarterly. Coverage will be for each quarter if the student elects to pay by this method.

New students and students returning to school following an absence of one or more quarters may also enroll during this special reopening.

An important feature of the student supplemental health care program is that coverage is provided during the summer vacation period when students are not on the campus, and for surgery the year around and emergencies away from the University at any time.

Students who reach an age when they are no longer covered by their

parents' hospital and medical insurance programs should apply for supplemental health coverage a few days before the date of their birthday when they lose this coverage. A student who marries also loses benefits under his parents' insurance and should apply for the special supplemental coverage within 30 days of the date of his marriage.

The hospitalization part of the program is underwritten by Minnesota Blue Cross and the surgical care is underwritten by Minnesota Blue Shield.

During the first two years of the program, 1,200 students received benefits, amounting to \$190,000 for approximately 6,000 days of care.

Commenting on the success of the student program, Dr. Ruth E. Boynton, director of the University Health Service, said, "The supplemental health care program provided hospital and medical-surgical benefits for a number of students who would have experienced considerable financial difficulties in meeting their bills. In many cases, students would have had to leave school if they had no supplemental health care.

"Parents also realized that the student supplemental health care pro-

gram stepped in and relieved them of expenses which could have posed serious financial problems."

Health Service officials recommend the program to all students and parents, and urge them to take advantage of the special enrollment period of January 3 to January 6, 1961.

Descriptive literature and application forms are available from the Business Office, Room W235, Health Service, University of Minnesota, Minneapolis 14.

## *Gopher Staff Urges Parents To Purchase Yearbook For Gifts*

**T**HE UNIVERSITY OF MINNESOTA yearbook, the *Gopher*, is one of the great traditions of the University. Published by and for students, it is available each year for \$6 a copy.

The *Gopher* staff urges parents to encourage their sons and daughters to support the yearbook. For all University students and for all graduates, the yearbook is a written and pictorial memorandum of their college days.

The *Gopher* may be purchased for gifts by writing to: *Gopher* Yearbook, 13 Murphy Hall, University of Minnesota, Minneapolis 14.

## REPORTS...

From Your University of Minnesota

Volume 43

Number 1

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# REPORT

Winter 1961

## FROM YOUR UNIVERSITY OF MINNESOTA



A winter view of the scenic Morris Campus shows Spooner Hall, the Health Service, and Music Hall.

*This is*

# UMM

*University of Minnesota, Morris*

**A**N INFECTIOUS SPIRIT of enthusiasm to succeed and to grow permeates the atmosphere of the University's newest campus, the University of Minnesota, Morris. Located in the city of Morris in west-central Minnesota, some 150 miles from the Twin Cities, the new University campus opened its doors for the first time just six months ago, September of 1960.

In less than 11 months, a transition has been made from high school level instruction to first-year college instruction. For 50 years the campus was known as the West Central School and Experiment Station. The School of Agriculture (the high school level instruction) will be phased out. Students presently enrolled will complete three more years of instruction, but no new students are being enrolled. The Experimental Station, which comprises 17 buildings and 821 acres of experimental plots, will continue in operation. With the elimination of the high school, new adult education programs will be planned and put into operation.

An inviting, tree-lined drive leads into the 35-acre UMM Campus and follows around the U-shaped mall, passing an impressive array of 13 collegiate buildings. The facilities include four resident halls for men and women, four classroom buildings, a health service, a gymnasium with swimming pool, a new auditorium, a library, a bookstore, a student lounge, and a cafeteria.

Cooperation in all areas was needed and received in

the planning of a new University program. A curriculum was formulated to conform with the high standards of academic excellence in instruction offered by the University in all of its collegiate programs. UMM offers a broad sequence of subjects in the humanities, languages, science and mathematics, and the social sciences. One or two-year pre-professional programs are offered in agriculture, dentistry, engineering, journalism, medicine, nursing — to name a few.

The new liberal arts college had an enrollment of 238 freshman students at the beginning of fall quarter and over 230 in the winter quarter. It is staffed by 17 full-time and four part-time faculty members, selected from institutions around the country.

The student body includes graduates from 51 different high schools representing 21 different Minnesota counties. Seventy-seven per cent of the students are from the upper 50 per cent of their high school graduating class.

Western Minnesota has long been without an institution for higher education. As early as 1933 the Board of Regents was petitioned by citizens of that area to offer college-level instruction at the West Central School and Experiment Station. Surveys and studies showed that of the 34 colleges in Minnesota, only four were located in the western half of the state . . . and because of the need for higher education, only about 22 per cent of the high school graduates from that area were going on to college. Finally, 27 years from the first time a request was submitted, the Board of Regents authorized the establishment of college education at Morris — on October 31, 1959.

What is attracting students to Morris? Two of the major reasons probably are need for a college, and cost.

Thirty-four per cent of the students now enrolled indicated they chose to attend UMM because they could live at home and commute; 21 per cent said it would have been very difficult financially to attend another college. Although the tuition on the Morris Campus is equal to that on other University campuses, boarding expenses at UMM are approximately \$200 a year less.

The UMM Campus is unique in several ways. It is a campus where the dean, Rodney A. Briggs, knows most students by name, where they are from, and how they are doing in their classes. Each student is personally interviewed by the dean before being accepted into the school. A program has been established with strong individual counseling and advisement.

It is a campus where parking is free and never a problem, where freshmen wear UMM crew caps, and where students make their own traditions and set the pace for those who will follow.

Six religious foundations, a student council, and student government are functioning. A college newspaper, the *Vanguard*, is published bi-weekly, and UMM students have a daily, five-minute radio program on the Morris station, KMRS.

A wide variety of interests highlight the UMM convocations, and nationally and internationally known personalities are billed for the University Artists Course, including the Vienna Boys' Choir, the St. Paul Opera Company, "Doc" Evans, and Bennett Cerf — giving area residents an opportunity to attend lectures and concerts in their own community.

A scholarship and loan program is in operation, and a student employment office is maintained in the Office of Student Services. An intercollegiate athletic program is developing rapidly, and UMM athletes have encountered neighboring college basketball teams. A concert band, mixed choir, male chorus, and individual lessons highlight the strong music program.

Physical facilities had to be rehabilitated to handle college courses. New biology, physics and chemistry laboratories have been built, and cafeteria and study rooms have been provided for commuting students — and there is a post office with individual post office boxes.

Unused and renovated equipment has been put to work again on the Morris Campus — tables from Haecker Hall, chairs from all over the University, kitchen equipment from the old food service on the St. Paul Campus, books from the library, old University band uniforms, choir robes from the School of Agriculture, and an organ from Coffman Memorial Union.

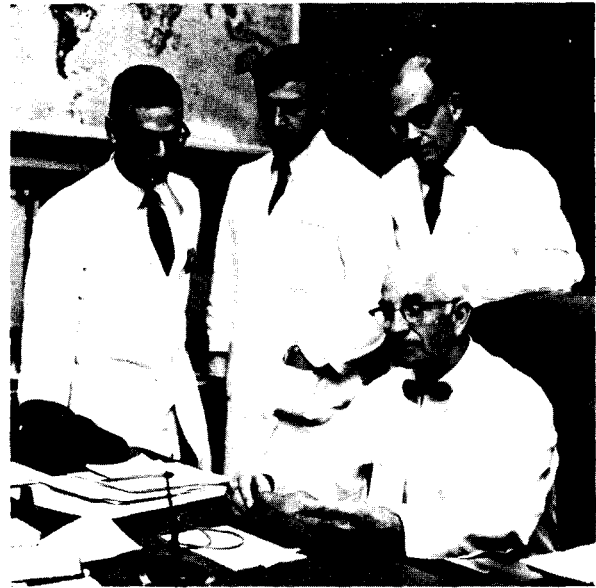
On July 1 the Morris library had one volume; on January 4 the 3000th volume was checked in. Theodore C. Blegen, former dean of the University Graduate School, gave his 600-volume personal library, plus two journal series.

The new University campus has received enthusiastic support from the citizens of Morris and the surrounding communities. Morris, a city of 4,200 citizens, originally pledged \$25,000 to help equip the chemistry and physics laboratories, and provide books for the library — but this sum was raised to \$52,500 by the time classes commenced. Today this figure has reached nearly \$80,000. A local group, the West Central Education Development Association, organized the community to raise money. Money-raising projects included door-to-door canvassing by high school students and a fruitcake-selling campaign launched by a civic group.

And UMM is attracting students . . . at a recent three-day open house for area high school seniors, 175 prospective students came from 40 different high schools encompassing a radius of 100 miles. Only 27 of the 175 were from the city of Morris.

A new college has emerged at Morris — complete in program and facilities — and enthusiastically supported by the citizens of the area. University spirit is summed up in the words of one of its young visitors, a prospective student ". . . I came away very impressed. There was something very unique about the University of Minnesota, Morris. You succeeded in transmitting to me the feeling of oneness that seems to hover over your school."

# Doctors Develop Diagnostic Test For Gastric Cancer



Checking the balloon radioautograph for results of a diagnostic test are Dr. Wangensteen, seated, and Drs. Ackerman, Santoro, and McFee.

**R**ADIOACTIVE PHOSPHOROUS and balloons coated with photosensitive emulsion are the tools now used by a team of University doctors to detect gastric cancer.

Under the direction of Dr. Owen H. Wangensteen, chairman of surgery, the University doctors have developed a test which has been used successfully to diagnose gastric cancer in over 300 patients.

"There are, of course, several other tests which are very useful in diagnosis," said Dr. Norman B. Ackerman, medical fellow in surgery and one of the doctors working on the test. "But some cancers are difficult to detect, and we are hopeful that this test will prove successful in these cases. There is also the possibility that the test will prove successful in diagnosing gastric cancers in their

early stages. This would be extremely important since early diagnosis is a major factor in obtaining higher cure rates in cancer of the stomach."

Development of the test using balloons and radioactive phosphorous ( $P^{32}$ ) grew out of studies, begun in 1940, of the reaction of the body to  $P^{32}$ . Among those conducting the studies were Dr. George E. Moore, then surgical interne at the University Hospitals and now director of Roswell Park Memorial Institute, Buffalo, N. Y., one of the nation's leading cancer institutes. Dr. Moore found that the chemical fluorescein was absorbed in greater amounts by cancerous tissue than by normal tissue.

Then Dr. Komei Nakayama from Japan, visiting the University in 1955, told University doctors about

diagnostic tests he had performed using radioactive phosphorous. He first injected the patient with  $P^{32}$  and then passed a small Geiger tube through the patient's mouth into his stomach in an effort to detect a concentration of  $P^{32}$  which would indicate the presence of cancerous tissue.

"University doctors tried this technique," said Dr. Ackerman, "but the results did not appear promising and seemed to offer little."

An actual radioautograph (a picture of radioactivity obtained on an X-ray film) was obtained in 1956 by Dr. Donald Shahon, until recently the director of the University's Cancer Detection Center. At the time of surgery, Dr. Shahon took tissues of patients who had been injected with  $P^{32}$  and placed them in contact with X-ray film. In every case, the cancer, since it had absorbed more  $P^{32}$ , was shown on the X-ray film.

The question then arose: would it be possible to obtain a radioautograph before surgery?

Dr. Wangensteen had developed the technique of placing balloons filled with cold water in the patient's stomach to stop bleeding. This sug-

Left: Stomach with cancer removed at operation. Right: Balloon radioautograph of stomach, positive for cancer.



(Continued on next page)

(Continued from inside)

gested to him the possibility that if the balloon were like an X-ray plate, it could be used to detect gastric cancer.

Under the direction of Dr. Wangenstein, Drs. Ackerman and Arthur S. McFee and Benjamin T. Santoro, medical fellows, began to develop a diagnostic test using a balloon and  $P^{32}$ . The University's Department of Medical Art and Photography and the Eastman Kodak Company cooperated with the doctors in developing a special latex base photo-sensitive emulsion which could be applied to the inside of the balloon and would expand and contract with the balloon.

In performing the test, the patient is first injected with radioactive phosphorous. Twelve to 24 hours later he is taken to a darkroom where the balloon, fastened to a stomach tube, is inserted through his nose into his stomach. The balloon is then inflated with air so that it takes the shape of the stomach. Four hours later the patient is returned to the darkroom and the balloon is removed. If cancerous tissue is present, the resulting radioautograph will show the area or areas of heavy concentration of  $P^{32}$ .

The success of the balloon and  $P^{32}$  diagnostic test was reported by the University doctors at the April, 1960, meeting of the American Surgical Association and at the fourth Na-

## President Wilson Describes University Needs at Meetings with Legislators

The over-all needs of the University and the educational philosophy on which these are based have been presented to Minnesota legislators by President O. Meredith Wilson in a series of appearances before both House and Senate committees.

On January 25, President Wilson met with the Senate Finance Committee and on January 26 and February 3 and 9 with the House University Committee. On February 1, he appeared before the Appropriations Committee of the House and on February 20 and 21 he met with the

tional Cancer Conference held at the University this year.

In a laboratory in the V.F.W. Cancer Research Center, the doctors are investigating the theoretical aspects of the test as well as other possible applications of  $P^{32}$  in the detection of cancer. Working with the Eastman Kodak Company they hope to adapt this type of test to detect cancer in other parts of the body.

The initial studies were supported by the Minnesota Division of the American Cancer Society, and currently the research is supported by the Atomic Energy Commission and the national American Cancer Society.

Senate Education Committee.

President Wilson stressed to the Legislators: 1, the need for improving faculty salaries and for increasing the number of faculty positions to provide for an effective teaching program; 2, the need for establishing the principle of depreciation on equipment, thus providing for replacement of worn out and obsolete equipment; and 3, the need for applying the per student cost principle to equipment and supplies, thus providing the money for supplies and equipment necessary to serve increasing enrollments. President Wilson said that it is essential that these needs be filled if Minnesota is to continue to have a distinguished institution of higher learning.

In his meetings with the legislators, President Wilson also emphasized the following points:

Nationally, the University is one of the most visible instruments of the people, and, therefore, is one of the means by which the State of Minnesota is judged; and

The University is the engine of change through which the state builds its economy. The economy of tomorrow is dependent on the vision of the people of Minnesota today in providing for their University.

## REPORTS...

From Your University of Minnesota

Volume 43

Number 2

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Spring 1961

# FROM YOUR UNIVERSITY OF MINNESOTA

## Beauty as a Part of Living Is Goal of Students in the

## RELATED ART DIVISION



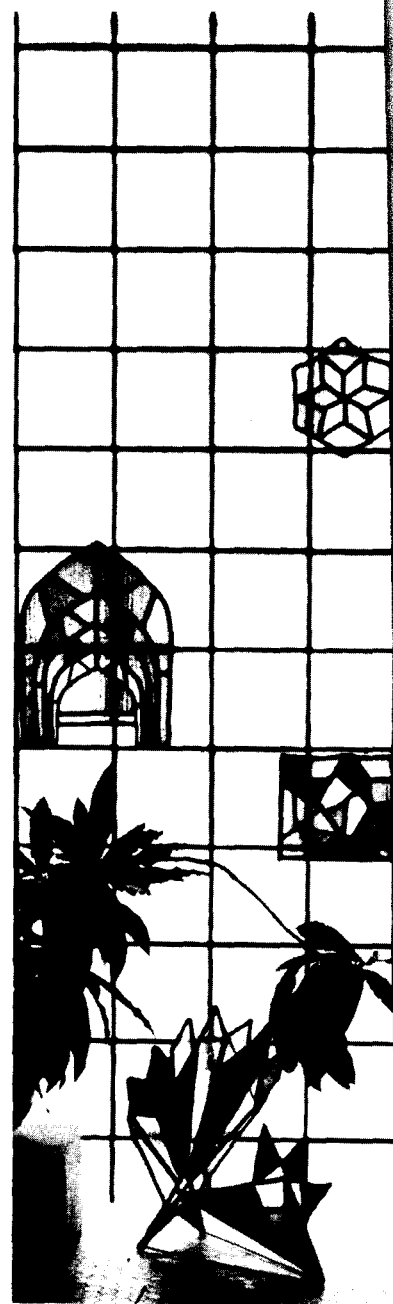
Finishing touches are applied to a decoration.

**M**ONKEY WRENCHES, buttons, match books, and other apparently unrelated items share one thing in common in the hands of related art students in the University's School of Home Economics — they are the tools with which a myriad of fabric designs are created.

Original silk screened fabrics are created by students in textile design courses.

Bringing beauty into the home is the goal of related art students, and to achieve their purpose, the students use items of every conceivable size, shape, and texture, from a paper clip to a potato peel. In addition to designing silk screen fabrics, the students design and make mosaics (using a variety of seeds), mobiles (using tissue paper and wire discarded from the Western Electric Company), block prints, and clothing. The students also create interior decorating schemes, rendering them in room perspectives. An exhibit of the students' work was on display early this month in the McNeal Hall of Home Economics on the St. Paul Campus.

Art as a part of living which enriches experiences, extends the range of art understanding, improves homes, and prepares students for careers in the related art field is the basic concern of the related art division. The division offers courses in home planning and furnishing, in crafts, textile, and costume design, and in art history. Gertrude A. Esteros is head of the division and Louise A. Stedman is director of the School of Home Economics.



Stained glass designs created by related art students are displayed against translucent window.



# THE WEST CAM

**T**HE LONG PLANNED FOR and much talked about West Campus of the University of Minnesota will soon begin to make its appearance on the West River sky line as girders, brick, and mortar reach for the sky with the construction of two office buildings and a classroom building.

With space at a premium, the University — like Manhattan — is going up. An office building for the School of Business Administration will have 13 floors and office and conference space for 400 faculty and staff members; a humanities and social sciences office building will have 15 floors and space for 460 faculty and staff members. Each tower will be connected to the new classroom building, which will have four floors in addition to the basement.

Special features of the new classroom building include two hexagonal rooms for large classes and three horseshoe-shaped rooms designed after the case study rooms first used at Harvard University. The case study rooms seat approximately 65 students each while still maintaining the informal



**School of Business Administration Tower**



Inside view of a professor's office, typical of those to be constructed in the new office towers, is shown in this replica.

**Classroom Building**



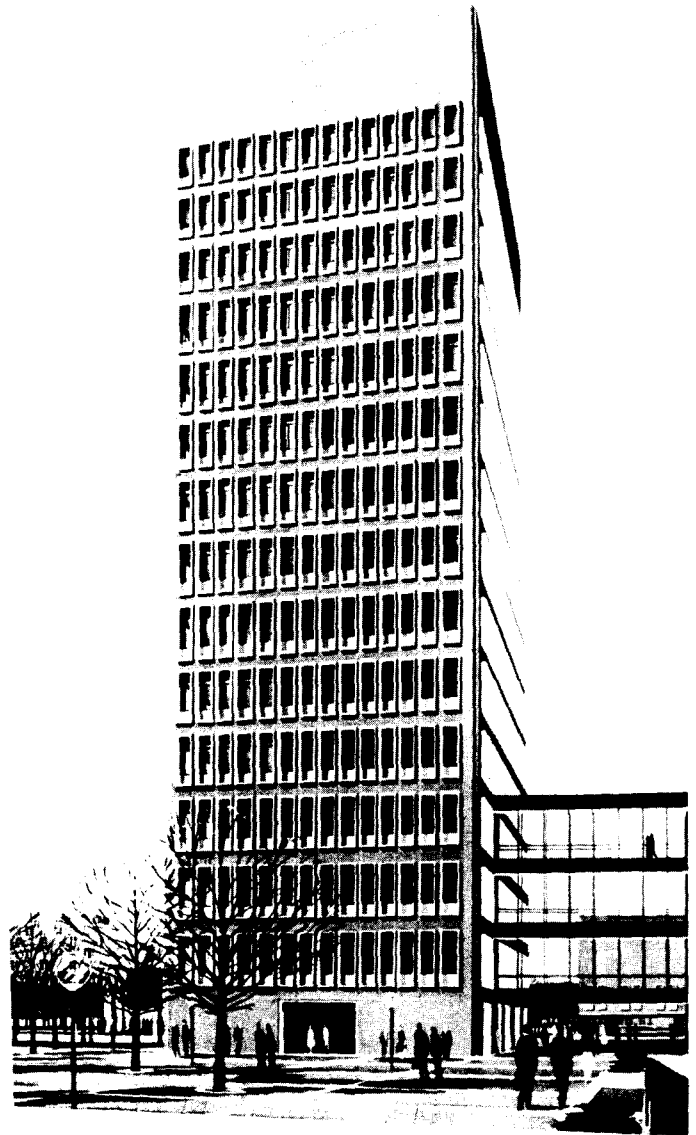
# PUS GOES UP!

atmosphere of the small seminar. Each room has three rows of chairs in a horseshoe formation, with the rows elevated as in an amphitheater. The chairs pivot, allowing each student to swing completely around and address a fellow student sitting behind him. The rooms have proven effective in stimulating classroom discussion.

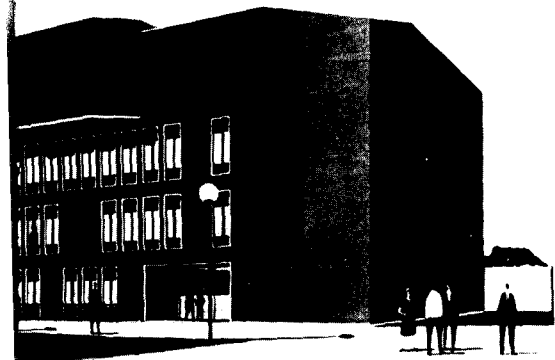
Special meeting areas for faculty and students are located on each floor of the classroom building at the point where the building connects with the office towers. In addition, the first floor of each office tower also provides student-faculty meeting areas.

These three new buildings will be centrally located on the West Campus, adjoining a future library and other instructional buildings. Excavation work is now complete and building construction should begin sometime in June. The buildings are scheduled to be ready for occupancy by the fall of 1962.

Funds for the buildings were appropriated by the 1959 legislature.



SLA Tower



# Parents Invited to Attend Cap and Gown Day

**M**AY 25 IS A FESTIVE DAY at the University of Minnesota. It is Cap and Gown Day — the day on which scholarship is especially honored at the University. A program in Northrop Auditorium begins with a procession of members of honor societies, recipients of scholarships, fellowships, awards and prizes, and of all honor students and members of the senior class.

The University of Minnesota Concert and Varsity Bands, together with the University Army, Navy, and Air Force ROTC Bands play as the procession wends its way up the Mall into the auditorium. Renowned speaker at the convocation program will be Dr. Elizabeth Jackson, a professor of English at the University for 45 years.

All parents, relatives, and friends of University students are invited to attend the Cap and Gown Day ceremonies on May 25. For parents who are not able to attend, the University will be happy to send a memento of the day, the Cap and Gown Day

program book, which lists the hundreds of scholarships, fellowships, awards and prizes, and the names of the students who were recipients. Just fill in the order blank below, cut it out, and mail to:

**University of Minnesota, Department of University Relations, 213 Administration Building, Minneapolis 14, Minnesota.**

## Thank You to Parents

**O**N APRIL 14, President O. Meredith Wilson sent a letter to parents of all University students living in Minnesota asking them to contact their legislators and urge them to reconsider the University appropriations bills which were "hopelessly inadequate to our needs."

After the President made his report to the Board of Regents on these bills, he appealed to parents by saying, "If we are to continue to provide the quality of education which you sought for your sons and daughters when you sent them to us, it is vital that the funds appropriated be increased. You can help us in this by contacting your legislators. Express to them our dismay with the critical problems we face. Urge them to lend their support to an increased appropriation. . . ."

The University is grateful, indeed, for the evidence of support shown by parents and friends of University students. It is encouraging to know that so many Minnesota citizens are proud of the role that higher education has played in the progress of this state and nation and strongly believe that future progress firmly rests on the continued willingness of the people to provide quality education for all their sons and daughters.

UNIVERSITY OF MINNESOTA —  
Department of University Relations  
Cap and Gown Day Program

NAME .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

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