

'73-'74

notre dame report

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September 28, 1973

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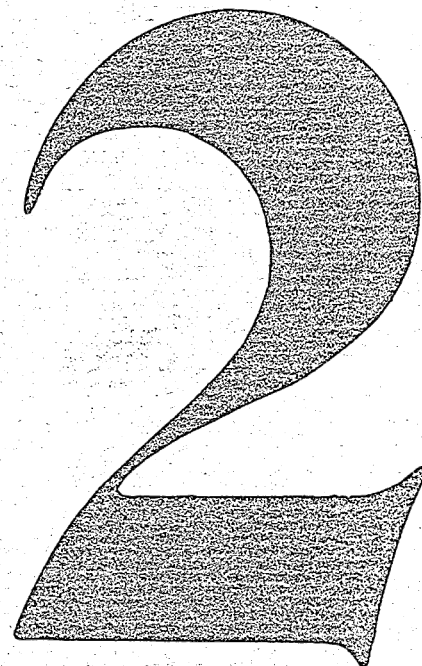
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the university

United Way campaign

The Notre Dame United Way Hour is announced by Dr. James L. Massey, general chairman for the 1973 campaign, and Brian C. Regan, co-chairman of the education division for St. Joseph County.

This innovative feature at 1:30 p.m. Monday, Oct. 22, in Washington Hall will bring faculty and staff together for one major orientation session rather than scores of smaller meetings as were held in past years. Rev. Theodore M. Hesburgh, C.S.C., will give the keynote talk and the Glee Club will provide entertainment. All University personnel with the exception of those needed for emergency operation of their department are invited to attend.

Notre Dame's participation in the annual United Way program begins Oct. 3 and ends Nov. 7. More than 30 social service agencies in the South Bend area serving members of the University community are members of the United Way campaign.

Assisting Massey in the Notre Dame program are Dr. James P. Danehy, chairman of the faculty division; Joseph P. Sassano, administration; Joseph F. O'Brien, staff; and Jay J. Kane, coordinator of student activities.

Each member of the University community will receive a pledge card and information brochure in the mail. Early return of the cards has been requested by Massey.

LaFortune renovations

The first portion of a two-phase renovation of LaFortune Student Center, the remodeling of the basement into an "Irish Pub," is scheduled to begin shortly.

The pub, which should open early in the spring semester, will feature soft drinks and a kitchen area where pre-prepared food may be warmed up.

The second phase, a general remodeling of the remainder of the building, is scheduled to start next summer. Proposed renovation features include extension of several balconies to make them usable, formation of "bi-level" rooms by combining certain rooms now

above each other, and construction of an exterior illumination system.

Ideas for the remodeling program were generated by student members of the LaFortune Renovation Committee, and plans were drawn up by student architects. Cost estimates for the project range from a high of \$850,000 to a low of \$350,000.

Nieuwland and Reilly Lectureships in Chemistry

The following is the schedule of the Nieuwland and Reilly Lectureships in Chemistry, 1973-1974. All lectures will be delivered in Room 123, Nieuwland Science Hall at 4:30 p.m.

Nieuwland Lecture:

Professor Doctor Feodore Lynen, Max Planck Institut fur Biochemie, Munich, West Germany.

Jan. 28 -- "The Structure of Biotin Enzymes"

Jan. 30 -- "Fatty Acid Synthetase from Yeast"

Feb. 1 -- "Enzymatic Studies on the Biosynthesis of Patulin"

Reilly Lectures:

Professor Sunney I. Chan, Arthur Amos Noyes Laboratory of Chemical Physics, California Institute of Technology, Pasadena, Calif.

Oct. 8 -- "Nuclear Magnetic Resonance Spectroscopy: A Powerful Method for Probing Biomolecular Structure and Dynamics"

Oct. 10 -- "Structural and Dynamical Properties of Phospholipid Bilayer Membranes"

Oct. 12 -- "Protein-Lipid Interactions in Membranes and Model Membrane Systems"

Professor Robert L. Hill, Department of Biochemistry, Duke University Medical Center, Durham, N.C.

Nov. 12 -- "Lactose Synthetase"

Nov. 14 -- "Superoxide Dismutase"

Nov. 16 -- "Glycoproteins"

Professor Howard V. Malmstadt, Department of Chemistry, University of Illinois, Urbana, Ill.

Feb. 25 -- "A New Generation of Laboratory Instrumentation"

Feb. 27 -- "Automated Spectrophotometry"

March 1 -- "Reaction-rate Methods of Analysis"

Professor Ernest Wenkert, Herman T. Briscoe Professor of Chemistry, Indiana University, Bloomington,

Ind.

March 18 -- "Alkaloid Synthesis"

March 20 -- "Terpene Synthesis"

March 22 -- "Carbon-13 Nuclear Magnetic Resonance Spectroscopy of Naturally Occurring Substances"

Professor David Anson Buckingham, Senior Fellow, Research School of Chemistry, Australian National University

April 22 -- "Metal Ion Promoted Reactions of Carbonyl Type Substrates Direct Activation Mechanism"

April 24 -- "Coordinated Amide and Hydroxide Ions as Nucleophiles"

April 26 -- "Recent Aspects of Base Hydrolysis of Cobalt (III) Acido Complexes"

Notre Dame Press

Books published by the University of Notre Dame Press will be distributed by the New York publishing firm of Harper and Row beginning Oct. 1, according to John Ehmann, acting director of the campus facility.

Retail bookshops will now be able to include Notre Dame Press publications with their orders for Harper and Row books, thus eliminating the necessity to forward special orders for single copies which many stores consider unprofitable.

Notre Dame Press will continue to promote and sell books from its campus offices through direct-mail promotion and bookstore visitations by personnel. Review copies will also be mailed from the campus to the media, and individual sales will be continued.

Department of Music Concert Series

The University of Notre Dame's Department of Music will sponsor eight more concerts during the first semester. All performances, except the final concert on Sunday, Dec. 9, will begin at 8:15 p.m. The last concert will start at 4 p.m.

Wednesday, Oct. 3 -- Sue Seid, organ. Sacred Heart Church. Free.

Friday, Oct. 12 -- Chicago Symphony Trio. Library Auditorium. Admission \$1.

Wednesday, Oct. 24 -- Christopher Parkening, guitarist. Washington Hall. Admission \$4 and \$3.

Wednesday, Oct. 31 -- Chamber Program: John Stinespring, bassoon; Karl Reinartz, violin; Louise Foreman, cello; and William Cerny, piano. Library Auditorium. Free.

Wednesday, Nov. 14 -- James Hejduk, organ. Sacred Heart Church. Free

Wednesday, Nov. 28 -- University of Notre Dame Glee Club; David Isele, conductor. Sacred Heart Church. Free.

Friday, Dec. 7 -- David Basch, horn; Patrick Maloney, tenor; William Cerny, piano. Library Auditorium. Free.

Sunday, Dec. 9 -- University of Notre Dame Choral Ensembles; Music of Advent and Christmas. Sacred Heart Church. Free.

Department of Philosophy Perspective Series

Metaphysics is the topic of the Department of Philosophy's Perspective Series for 1973-1974.

The following visitors will be in residence on week each, delivering lectures at the times and places indicated:

Wilfrid Sellars, University of Pittsburgh

Oct. 8 and Oct. 10, 8 p.m. New Biology Auditorium

Oct. 12, 3:30 p.m., Faculty Lounge (Library)

Stephen Korner, Bristol University and Yale University

Dec. 3 and Dec. 5, 8 p.m., New Biology Auditorium

Dec. 7, 3:30 p.m., Library Auditorium

Donald Williams, Harvard University (Emeritus)

Feb. 4 and Feb. 6, 8 p.m., New Biology Auditorium

Feb. 8, 3:30 p.m., Faculty Lounge (Library)

Anthony Quinton, New College, Oxford

April 1 and April 3, 8 p.m., New Biology Auditorium

April 5, 3:30 p.m., Faculty Lounge (Library)

All are invited to the lectures. For further information, please contact Dr. Michael J. Loux, Department of Philosophy.

ND-SMC Theatre

Four major productions, including Shakespearean history and a lively 18th Century musical, will be performed by the Notre Dame-Saint Mary's College Cooperative Department of Speech and Drama during the 1973-1974 season.

"Richard III," by William Shakespeare. O'Laughlin Auditorium. Oct. 9-Oct 13 at 8:30 p.m. Dr. Reginald Bain, director.

"Thieves Carnival," by Jean Anouilh. Washington Hall. Dec. 4 through Dec. 8 at 8:30 p.m. Charles Ballinger, director.

"The Homecoming," by Harold Pinter. Washington Hall. March 26 through March 30. Dr. Reginald Bain, director.

"The Beggar's Opera," by John Gay. O'Laughlin Auditorium. April 26-27, May 2-4 at 8:30 p.m. Frederic Syburg, director.

Sponsors of the annual productions are offering a special four-play package ticket for \$7.50. Individual tickets for each performance will go on sale at the boxoffices during the week preceding each run.

Memorial Library hours

Schedule when classes are in session:

Monday through Saturday 8 a.m. until 11:45 p.m.

Sunday 1 p.m. until 11:45 p.m.

Will be in effect:

Tuesday, Sept. 4, 1973 through Wednesday, Oct.

17, 1973. Monday, Oct. 22, 1973 through Tuesday,

Nov. 20, 1973. Sunday, Nov. 25, 1973 through

Saturday, Dec. 15, 1973.

Schedule during final examination week:

Monday through Saturday 8 a.m. until 12:45 p.m.

Sunday 1 p.m. until 12:45 a.m.

Will be in effect:

Sunday, Dec. 16, 1973 through Friday, Dec. 21, 1973.

Schedule when classes are not in session:

Monday through Saturday 8 a.m. until 5 p.m.
Sunday Closed

Will be in effect:

Thursday, Oct. 18, 1973 through Sunday, Oct. 21, 1973. Wednesday, Nov. 21, 1973 through Saturday, Nov. 24, 1973. Saturday, Dec. 22, 1973 through Monday, Jan. 14, 1974.

Memorial Library will be closed:

All Sundays when classes are not in session;
Thursday, Nov. 22, 1973 (Thanksgiving Day);
Tuesday, Dec. 25, 1973 (Christmas Day); Tuesday,
Jan. 1, 1974 (New Year's Day)

Woodrow Wilson National Fellowship Foundation

The University of Notre Dame is one of several private institutions across the nation joining the Woodrow Wilson National Fellowship Foundation in a program of visiting professorships for representatives of business, industry and the professions. The program is funded by a million dollar grant from the Lilly Endowment of Indianapolis.

Visiting professors, to be known as Woodrow Wilson Senior Fellows, will serve at private liberal arts colleges for a week or more at a time. Walter V. Schaefer, justice of the Illinois Supreme Court and a member of the Notre Dame Law School Advisory Council, has been named to the original list of fellows.

Others include David Broder, Pulitzer Prize winning journalist for the Washington Post; W. Walton Butterworth, former U.S. ambassador to Canada; Lord Caradon, British diplomat; David C. Collier, treasurer of General Motors Corp.; LaDonna Harris, president of Americans for Indian Opportunity; Emmet John Hughes, author and journalist; George Romney, former governor of Michigan, and former senator Margaret Chase Smith.

Alumni giving

Alumni giving to Notre Dame set a record high of \$3,476,598 in the fiscal year 1972-1973, according to a report of the University's Development Office.

The total included 15,852 gifts from individuals, totaling \$1,484,274 from living alumni and \$1,112,857 from alumni bequests, as well as alumni-related corporate (\$309,049) and foundation (\$570,418) gifts. The previous high for alumni giving was \$2,165,700 in 1966 and the 1971-1972 total was \$1,894,553. The increase and the record average alumni gift of \$215 were largely accounting for by seven major alumni benefactions, ranging from \$88,000 to \$568,000.

Non-alumni giving, exclusive of research funding, totaled \$5,722,508.

Other highlights of the report included the following:

-- The top four states in contributions were, in

order, Indiana, New York, Illinois and Michigan, each accounting for more than \$1 million.

-- Overall alumni participation remained at the 50 per cent level of recent years, but classes in the two post war decades, from 1948 to 1968, all exceeded that figure, with 61 per cent of 1959 leading all classes.

-- Deferred giving by alumni (\$1,112,857) was more than double the next highest year.

-- Non-alumni related gifts from corporations (\$1,432,132) hit a new high.

-- The University had its most successful direct mail results.

Dr. James W. Frick, vice president for public relations and development, noted that the report covered the first year of Notre Dame's Annual Fund, which was reinstated following a decade of successive capital gifts campaigns by the University.

Errata and Addenda Notre Dame Report Index

The following corrections and addition should be included in the Index of Notre Dame Report, Volume 2, which was published August 31. Page numbers refer to that issue.

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Kelsey, Rev. Morton T.

f.n., #1-4

Current Publications and Other Scholarly Works, #4-105, #20-464

Faculty, Academic Year 1972-73, #13-280

1973 Photo Directory, Assistant Professor, Graduate Studies in Education, #13-303

Kelsey, Sidney

Monthly Summary, Awards Received, #4-107, #19-444

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1973 Photo Directory, Professor, Civil Engineering, #13-303

Errata and Addenda NDR #13, Faculty Senate Member, #15-360

Monthly Summary, Proposals Submitted, #18-410

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McKim, Vaughn R.

Nominee, Committee on the Course of Study, #4-112; Member, #13-272

Philosophy Honors Society, #8-175

Faculty, Academic Year 1972-73, #13-282

1973 Photo Directory, Associate Professor, Philosophy, #13-308

f.n., #17-380

faculty notes

University appointments

David C. Isele, assistant professor of music, has been named director for the University of Notre Dame Glee Club and University Chorus.

Sue Henderson Seid, assistant professor of music, has been named University organist and director of music at Sacred Heart Church.

Non-university appointments

Dr. David L. Appel, Associate Professor of Marketing, was elected president of the Michiana Chapter of the American Marketing Association.

Dr. Jeremiah P. Freeman, chairman, Department of Chemistry, was elected as Chairman-Elect of the Division of Organic Chemistry of the American Chemical Society.

Miscellany

Dr. Teoman Ariman, associate professor of aerospace and mechanical engineering, spoke on "Collection of Aerosol Particles in an Electrostatic Field" at a symposium on surface and colloid chemistry at the 1973 annual meeting of the American Chemical Society Aug. 26-31 in Chicago, Ill.

Dr. J. Philip Gleason, chairman, Department of History, participated in a conference on American religious history at Harwichport, Cape Cod, Aug. 23-25, and presented a paper entitled "Coming to Terms with American Catholic History." Dr. Gleason has also been invited to serve on the subcommittee on American Church History of the Committee for the Observance of the Bicentennial which has been set up by the National Conference of Catholic Bishops.

Bro. Anthony J. Ipsaro, S.M., assistant professor of graduate studies in education, will deliver a talk entitled "The Dynamics of Change" as part of a YWCA forum on Quality and Equality in Education on Nov. 7.

Dr. Kwan S. Kim, assistant professor of economics, delivered a paper entitled "Optimal Investment Strategies in an Open Labor-Surplus Economy" at a session on economic planning during the European meeting of the Econometric Society in Oslo, Aug. 31.

Dr. William H. Leahy, associate professor of economics, delivered two papers at the Western Economics Association meetings in Los Angeles, Calif., Aug. 15. The titles of the papers are "Expansion Paths and Regional Growth Differentials Reexamined" and "A Critique of the State's Role in Countercyclical Policy."

Necrology

Rev. Howard J. Kenna, C.S.C., who recently retired as Provincial Superior of the Holy Cross Fathers and as a Fellow and Trustee of the University of Notre Dame, died suddenly Sept. 13 at the Provincial House in South Bend.

office of advanced studies

Notes for Principal Investigators

Indirect Cost Rates for Government Sponsored Programs

Negotiations for the fiscal year 1974 indirect cost rate for Government sponsored programs were completed on September 7, 1973. The cognizant Government agency for these negotiations is the Department of the Air Force. Until further notice, the indirect cost rates to be used for Government sponsored programs are:

Research Projects:	
On-Campus	60.00% of Salaries and Wages
Off-Campus	14.57% of Salaries and Wages
Education Projects:	
On-Campus	93.92% of Salaries and Wages
Off-Campus	22.47% of Salaries and Wages
Radiation Laboratory	40.00% of Salaries and Wages

The rates are applicable to direct salaries and wages, including holidays, vacations, and sick leave. Fringe benefits such as TIAA, FOAB, Workmen's Compensation, Blue Cross-Blue Shield, and Total Disability Insurance should not be included in the base for calculating indirect costs.

National Institute of Education Research Grants Program

The National Council on Educational Research met in Washington, D.C. on August 6, and adopted a policy that HEW's National Institute of Education allocate 10 to 15 percent of its budget to a research grants program.

The Council is legislatively mandated to establish general policies for the Institute and to review its conduct.

Specific dollar amounts allocated to this program will depend upon the final Congressional appropriation for NIE and the technical quality and educational relevance of the proposals submitted.

The program will be designed to strengthen the scientific and technological foundations of education by inviting researchers to submit proposals relevant to any aspect of American education problems. The Institute also will identify priority concerns and make special efforts to seek and support research that addresses those concerns. One area of special emphasis will be the education of poor and minority children.

As part of the program, NIE also will work to develop a general framework for education research to help make research findings available in a form easily useable by researchers, developers, and educators. The tentative schedule for the program calls for:

- Detailed announcements and guidelines to be issued in September.
- Prospectuses to be submitted by November.
- Proposals to be submitted by January from those whose prospectuses indicate the greatest potential for technical quality and educational relevance.
- Grants awards to be made in late spring.

Information Circulars

National Endowment for the Humanities 1974 Summer Stipends

NO. FY74-21

ELIGIBILITY

For college and university teachers and other humanists who have completed their professional training and are not degree candidates.

Applicants must be nominated by their institutions and each institution may nominate

three applicants for summer stipends. Two (but not more than two) of the nominees should be in an early stage of their careers and one (but not more than one) nominee should be in a more advanced stage of his career. Persons not employed by academic institutions may apply directly.

SCOPE OF SUPPORT

Includes, but is not limited to, the following: language, both modern and classical; linguistics; literature; history; jurisprudence; philosophy; ethics; comparative religion; archaeology; the study of the history, criticism, theory, and practice of the arts; those aspects of the social sciences which have humanistic content and employ humanistic methods; and the study and application of the humanities to the human environment, with particular attention to the relevance of the humanities to the current conditions of national life.

PURPOSE AND PRIORITIES

The purpose of these stipends is to help college and university teachers and other humanists in their research and self-development as teachers and contributors to learning in the humanities. The work done under an award may be study or research within the applicant's special area of interest, or it may be study in some other area that will enable him to understand his own field better, enlarge his competence, and become more broadly informed.

During this period of the bicentennial observance of the American Revolution, the Endowment has a special interest in studies relating to the Revolutionary era and to the philosophical and social foundations of the Revolution and the establishment of our nation. This interest is directed not only to studies of the Revolutionary era itself, but also to studies of the origins and historical development of that era's ideals and institutions. Proposals to study the ways in which these ideals and institutions respond to the demands of the modern world are particularly encouraged.

REQUIREMENTS

Recipients must devote full time to their study. They may not hold other major fellowships or grants during tenure except sabbaticals or grants from their own institutions. Small supplemental grants are permitted if justified.

APPLICATION FORMS

Application forms and instructions are available in the office of the Dean of the College of Arts and Letters. The due date for applications is October 15, 1973.

National Endowment for the Humanities Fellowships for Younger Humanists

NO. FY74-22

PURPOSE AND PRIORITIES

The purpose of these awards is to give promising young humanists, particularly teachers in the four-year colleges and universities, time free to develop their abilities as scholars and contributors to learning in the humanities. Preference will be given to persons who are at a relatively early point in their professional development. The work undertaken with a fellowship may be within the applicant's special area of interest, or in some other area that will enable the applicant to understand his own field better, to extend his competence, and to become more broadly informed. Proposals from teachers should bear a close relationship to applicant's teaching interests.

SCOPE OF SUPPORT

Includes, but is not limited to, the following: language, both modern and classical; linguistics; literature; history; jurisprudence; philosophy; ethics and comparative religion; archaeology; the study of the history, criticism, theory, and practice of the arts; those aspects of the social sciences which have humanistic content and employ humanistic methods; the study and application of the humanities to the human environment with particular attention to the relevance of the humanities to the current conditions of national life.

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ELIGIBILITY

Applicants must have completed their professional training. Degree candidates are not eligible, nor are persons seeking support for work leading toward degrees.

REQUIREMENTS

Recipients of awards must devote full time to their fellowship study. Fellows may not hold other major fellowships or grants, except sabbaticals or grants from their own institutions, either during their tenure or during the balance of the tenure year. Supplemental grants are permitted.

HOW TO APPLY

For application forms and additional information, write to:

Division of Fellowships
National Endowment for the Humanities
806 15th Street, N.W.
Washington, D.C. 20506

The deadline for applications is October 15, 1973.

Committee on International Exchange of Persons Junior Lectureship Awards for 1974-75 under the Fulbright-Hayes Program

NO. FY74-23

Applications will be accepted until November 1, 1973 for Junior lectureships in American studies in Belgium, France, Italy and Spain for the academic year 1974-75. Applicants should be advanced graduate students or scholars who have recently completed the Ph.D., preferably in American literature, American history or government, but also in economics, geography, psychology, or sociology. Good knowledge of French or Spanish is required for appointments in France or Spain.

One award is also to be offered to a junior scholar for research in Belgium in some aspect of Atlantic studies.

Additional information and application forms are available from the Committee on International Exchange of Persons, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

A preliminary list of senior Fulbright-Hayes grantees for 1973-74 has just been issued. Of the nine applicants from Notre Dame three have been given grants: Professors James Carberry for Research in Chemical Engineering in Italy, and Frederick Dow for lecturing in Business Administration in Ecuador, and to Daniel Koob, Ph.D. candidate, for a junior lectureship in American Studies in France. A subsequent and more complete list will appear later.

Graduate School

Ford Foundation Fellowships for Black Americans, Mexican Americans, Native Americans, and Puerto Ricans, 1974-1975

NO. FY74-GS5

These Fellowship programs are offered as part of a broader Foundation program of assistance to historically disadvantaged minorities (such as Black Americans), whose opportunities for participation in higher education have been limited as the result of racial discrimination and/or other factors.

In order to be considered for one of these fellowships, applicants must meet all of the following qualifications:

1. They must be citizens of the United States.
2. They must be enrolled in or planning to enter an accredited U.S. graduate school offering the doctoral degree in their field of study.
3. They must be currently engaged in or planning to enter a career in higher education.

Eligibility is limited to (a) applicants who plan to pursue full time study toward the doctoral degree in the Arts or Sciences or (b) applicants who hold a first post-baccalaureate professional degree - such as the MBA, MPA, MSW or M.Ed. - and plan to continue on to the doctoral degree in preparation for a career in higher education.

These awards are for one year only, but are renewable upon reapplication if the fellow maintains satisfactory progress toward the doctorate. The fellow will be expected to study full time and to complete the requirements for the doctorate as soon as possible.

Fellowship awards for 1974-75 will include the full tuition and fees required by the graduate school, an allowance of \$300 for books and supplies, and a monthly stipend of \$250 to help meet living costs. A married fellow may apply for an additional stipend of \$50 a month for his/her spouse and each dependent child, provided that dependency can be substantiated. Applicants receiving Dissertation-Year awards may apply for a research allowance in lieu of the book allowance.

Twelve-month awards are available for applicants planning to study full time during the summer session 1974 and the academic year 1974-1975, starting with July 1974. Ten-month awards are available for those planning to study full time during the academic year 1974-1975, starting with September 1974.

All applicants are required to submit Graduate Record Examination Scores for the Aptitude and Advanced Tests and are advised that these tests will be administered on October 27 and December 8, 1973, and that the deadlines for registering for them are October 2 and November 13, 1973.

Arrangements for taking the tests should be made by the applicant directly with the Graduate Record Examinations, Educational Testing Service, Box 955, Princeton, New Jersey 08540. Applicants should request that their scores be sent directly to the "The Ford Foundation, Graduate Fellowships, Code Number R2251."

The deadline for submitting completed applications and all supporting documents is January 5, 1974.

The names of the winners will be announced on March 25, 1974.

Application forms must be requested by the individual applicant. No applications will be sent to intermediaries. For application forms and additional information write to:

GRADUATE FELLOWSHIPS
FOR BLACK AMERICANS
The National Fellow-
ships Fund
795 Peachtree Street,
N.E.
Suite 484
Atlanta, Georgia 30308

GRADUATE FELLOWSHIPS
FOR MEXICAN AMERICANS
The Ford Foundation
320 East 43rd Street
New York, New York
10017

GRADUATE FELLOWSHIPS
FOR NATIVE AMERICANS
The Ford Foundation
320 East 43rd Street
New York, New York
10017

GRADUATE FELLOWSHIPS
FOR PUERTO RICANS
The Ford Foundation
320 East 43rd Street
New York, New York
10017

Danforth Graduate Fellowship for Women 1974-75

NO. FY74-GS6

Purpose:

To find and develop college and secondary teachers among American women with the bachelor's degree whose professional preparation has been interrupted or postponed and, hence, no longer qualify for more conventional fellowship programs.

Period of Award:

One year, beginning September 1, 1974. Renewable annually on evidence of satisfactory continuous progress.

Stipend:

\$3,000 plus tuition and fees for single

persons; \$4,000 plus tuition and fees for married persons.

Selection criteria:

Strong undergraduate record. Indication of strong motivation and intellectual curiosity despite interrupted academic career. A study plan consistent with candidate's goal and realistic in terms of her background and family responsibilities. Strong sense of moral and intellectual responsibility in personal and professional life. Physical stamina commensurate with academic and family demands. Graduate Record Scores, Aptitude and Advanced if offered in candidate's major field.

Application on request from:

Director, Graduate Fellowships for Women
Danforth Foundation
222 South Central Avenue
St. Louis, Missouri 63105

Deadline:

January 11, 1974.

National Science Foundation Graduate Fellowships 1974-75

NO. FY74-GS7

Purpose:

Initial NSF Graduate Fellowship awards are intended for students at or near the beginning of their graduate study. In general, therefore, those eligible to apply will be college seniors or first-year graduate students this Fall; in particular, eligibility is limited to individuals who by Fall 1974 will have completed not more than one year of full-time or part-time graduate-level study. Subject to the availability of funds, new fellowships awarded in the Spring of 1974 will be for periods of three years, the second and third years contingent on certification to the Foundation by the fellowship institution of the student's satisfactory progress toward an advanced degree in the sciences.

These fellowships are awarded for study or work leading to master's or doctoral degrees in the mathematical, physical, medical, biological, engineering, and social sciences, and in the history and philosophy of science. Awards are not made in clinical, education, or business fields, in history or social work, or for work leading to medical, dental, law, or joint Ph.D.-professional degrees.

Application Materials:

Application materials may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

Application and Award Dates:

The deadline for filing applications for

Graduate Fellowships with the Fellowship Office, National Research Council, is November 26, 1973; an application form received in an envelope postmarked after that date will not be accepted. On March 15, 1974 the National Science Foundation will notify all applicants by letter of the outcome of their applications. Those applicants who were considered worthy of receiving Graduate Fellowships but to whom awards could not be made will be accorded Honorable Mention.

Monthly Summary

Awards Received

IN THE MONTH OF AUGUST, 1973

Department or Office	Principal	Short title	Sponsor	Amount-\$ term
AWARDS FOR RESEARCH				
Chemical Eng.	Verhoff	Mathematical modelling of nutrient effects in river systems	Tri-County Conservancy, Brandywine	1,380 3 mos.
Biology	Saz	Chemotherapy and metabolism of filariids	Natl. Inst. Health	21,336 1 yr.
Aerospace Mechanical Eng.	Mueller, Lloyd, MacDonnel	Transport phenomena related to prosthetic heart valve	Natl. Sci. Fdn.	43,800 1 yr.
Biology	Tweedell	Cancer research project	Phi Beta Psi Sorority	5,000 1 yr.
Chemistry	Martinez-Carrion	Isozymes of heart glutamate aspartate transaminase	Natl. Inst. Health	17,531 1 yr.
Metallurgical Eng.	Miller	Adhesive wear studies	Union Carbide Corp.	4,000 4 mos.
Biology	Crovello	Systematic and evolutionary studies in the brassicaceae	Natl. Sci. Fdn.	49,800 2 yr.
Chemistry	Castellino	Plasminogen isozymes and stripto kinase	Natl. Inst. Health	17,234 1 yr.
Biology	Craig	Genetics and reproductive biology of <i>Aedes</i> mosquitoes	Natl. Inst. Health	119,630 1 yr.
Chemistry	Nowak	NMR studies of metals in kinase and related enzymes	Natl. Inst. Health	27,000 1 yr.
AWARDS FOR EDUCATIONAL PROGRAMS				
Philosophy	Manier	Government, the family, and abortion	Ind. Comm. Humanities	1,610 5 mos.
Grad. Studies Educ.	Bartlett	Phalin fellowship	Howard V. Phalin Fdn.	5,000 1 yr.
Urban Studies	Egan	Pastoral and social ministry	William M. Scholl Fdn.	2,200 ---
Financial Aid Scholarships	McCauslin	Gulf Oil student emergency loan fund	Gulf Oil Fdn.	10,000 ---

Proposals Submitted

IN THE MONTH OF AUGUST, 1973

Department or Office	Principal	Short title	Sponsor	Amount-\$ term
PROPOSALS FOR RESEARCH				
Areo. Mech. Eng., Law School	Daschbach, Foschio	Judicial statistics research, State of Indiana	Cent. Judicial Educ.	27,999 1 yr.
Chemical Eng.	Kohn	Binary and ternary hydrocarbon systems	Natl. Sci. Fdn.	32,426 1 yr.
Civil Eng.	Morgan	Analysis of the Union City tornado photographs	Natl. Severe Storms Lab.	8,995 9 mos.
Biology	Saz	Intermediary metabolism of helminths	Natl. Inst. Health	83,948 1 yr.
Metallurgical Eng.	Allen	Defects, transformations, and polytypism in laves phases	Natl. Sci. Fdn.	59,493 2 yr.
Metallurgical Eng.	Allen	Defects, transformations, and polytypism in laves phases	U.S. Army, ARO-D	59,493 2 yr.
Microbiology Lobund Lab.	Pollard	Development and maintenance of germfree animal colonies	Natl. Inst. Health	102,493 1 yr.
Microbiology Lobund Lab.	Wagner	Response of gnotobiotics to specified microbial floras	Natl. Inst. Health	49,271 1 yr.
Chemistry	Basu	Metabolism of glycosphingolipids in animal cells	Natl. Inst. Health	41,343 1 yr.
Biology	Weinstein	Genetics and cancer	Cancer Soc. St. Jos. Cty.	7,814 1 yr.
PROPOSALS FOR EDUCATIONAL PROGRAMS				
Art Gallery	Porter	The docent coordinator and program	Ind. Arts Commission	18,583 1 yr.

Summary of Awards Received and Proposals Submitted

IN THE MONTH OF AUGUST, 1973

AWARDS RECEIVED

Category	Renewal		New		Total	
	No.	Amount	No.	Amount	No.	Amount
Research	5	\$ 164,877	5	\$ 141,834	10	\$ 306,711
Facilities and Equipment	-	---	-	---	--	---
Educational Programs	2	6,610	2	12,200	4	18,810
Service Programs	-	---	-	---	--	---
Total	7	\$ 171,487	7	\$ 154,034	14	\$ 325,521

PROPOSALS SUBMITTED

Category	Renewal		New		Total	
	No.	Amount	No.	Amount	No.	Amount
Research	7	\$ 376,788	3	\$ 96,487	10	\$ 473,275
Facilities and Equipment	-	---	-	---	--	---
Educational Programs	-	---	1	18,583	1	18,583
Service Programs	-	---	-	---	--	---
Total	7	\$ 376,788	4	\$ 115,070	11	\$ 491,858

documentation

Baccalaureate Sermon August 10, 1973

A tension exists at the heart of every university. I do not refer to the well-publicized altercations of recent years when various constituent parts of the university -- students, faculty, administration -- confronted one another. Such tensions were of course very real, and I do not mean to minimize them or to suggest that because for the moment they seem to have subsided they might not erupt again next term or next year. Universities have always been tumultuous places. But the confrontations of the sixties had less to do with the university as such than with the conditions of American society at large, a society which discovered to its chagrin that its youthful and idealistic image of itself did not square with a fat and somewhat cynical middle age.

The tension I speak of is more properly the university's own special problem. It manifests itself differently at different times and places, but essentially it remains always the same. It turns around the question, What is knowledge for? What purpose does knowledge have? Every one agrees that a university is a community of persons in search of knowledge, a community of persons dedicated to ideas and their consequences. To agree to so much is indeed an achievement, but it leaves unanswered the question raised a moment ago: What are ideas for?

Well, when you boil down all the arguments that have ever raged on this subject, and those that continue to rage even now, you find only two possible alternatives. Either knowledge and ideas are worthy of pursuit for their own sake, or else they are important to the degree that they are useful for something else. The truth is the supreme good in itself without any consideration of further utility, runs one side of the argument. The truth, counters the other side, is the vehicle whereby persons can become free or secure or rich or powerful and, therefore, happy.

An analogy from the world of politics suggests itself through that jingle often quoted, despite its small regard for meter and rhyme:

Every baby born alive
Is a little liberal or conservative.

If one sets aside, legitimately I think, the maniacal extremes of left and right, it seems that this bit of doggerel expresses the irreducible limits of political debate. There are of course vast variations and countless nuances within the two categories. Even so, it is not unfair to describe a liberal, as we use the word today, as a person who wants to change those things in society which are bad or wrong; and a conservative as one who wants to preserve in society those things that are good. Civilized nations stand poised between these polarities, or rather they veer between the two and form of them quite unpredictable combinations.

Similarly, great universities exist or, I would prefer to say, prosper, because they represent a rock-bottom and insoluble conflict. They harbor within themselves some who think knowledge is an end in itself and others who think knowledge is a means to an end. Let us call the first position speculative and the second practical.

The speculative tradition is older and for a long time held the field more or less exclusively. It goes back to Plato and Aristotle and moves through the stoics, the medieval schoolmen and the savants of the Renaissance to Newman and his "idea" of a university and,

in our own day, to Jacques Barzun. The business of a university, said Newman, was to produce "the imperial intellect" which

is the highest state to which nature can aspire...The intellect which has been disciplined to the perfection of its powers, which knows, and thinks while it knows, which has learned to leaven the dense mass of facts and events with the elastic force of reason: such as intellect cannot be partial, cannot be exclusive, cannot be impetuous, cannot be at a loss, cannot but be patient, collected and majestically calm, because it discerns the end in every beginning, the origin in every end, the law in every interpretation, the limit in each delay; because it ever knows where it stands, and how its path lies from one point to another

The spokesmen of the practical tradition are seldom as eloquent as Newman, but that has not prevented them from attaining an increasingly dominant position within the university. They go back through the Enlightenment to Francis Bacon and the great scientists of the 17th century. In the English-speaking world they found their strongest advocates in Bentham and John Stuart Mill and all the other pragmatists and scientific specialists of the 19th and 20th centuries. And lest I be misunderstood, let me say I put no pejorative connotation on the word "pragmatist." These are the people who saw the utility of knowledge to relieve pain, to insure safety, to construct open and wholesome cities, to order society, to accelerate movement and to release enormous stores of energy -- there is nothing unworthy in that kind of pragmatism either for the university or the society at large which the university serves. Knowledge for the idealistic utilitarian is power: power to do good for mankind, to promote the greatest happiness, in accordance with his definition of happiness, for the greatest number.

The Duke of Wellington, victor over Napoleon at Waterloo, once expressed what I have called the practical tradition within the university in a succinct and soldierly maxim. A university education, said the bluff old duke, should enable a young lieutenant, in command of two non-commissioned officers and 15 privates, to transport a shipload of dangerous convicts from England to Australia with safety, dignity and dispatch.

It seems to me that the university as we know it, more by accident I suspect than design, has achieved a salutary balance between the speculative and practical traditions. On every campus you will find adherents of Newman's "imperial intellect" and also devotees of Wellington's brand of social utility. I for one would not like to see the impasse resolved, any more than I would want to see conservative or liberal politicians completely undone by their opposite numbers. The health of the university, no less than that of the political structure, depends upon the maintenance of both points of view.

It further seems to me that a Christian university, and particularly a Catholic one like Notre Dame, has a unique contribution to make to the preservation of this happy balance. For the Catholic tradition possesses a tension of its own between the speculative and the practical, between the contemplative and the active. What precisely is the objective of Catholic belief? Listen to St. James: "This is true religion in the eyes of God the Father, to succour widows and orphans in their tribulation and to keep oneself unspotted from this world." Or listen to St. John: "This is eternal life, to know thee the one true God and Jesus Christ whom thou has sent."

Catholic belief consists in knowing, but also in doing; in faith, but also in works; in contemplation indeed, but also in the active ministries of the corporal and spiritual works of mercy. The cloistered Carmelite who spends eight hours a day on her knees, lost in that prayer in which heart speaks to heart and words are unnecessary, is not less, but neither is she more, representative of the Catholic tradition than her sister who, in a purple pant suit, carries a picket sign to protest social injustices.

So the Catholic university is pledged in a special way to the endless debate between the speculative and the practical. And the Catholic university must be a place where both traditions are honored and indeed enshrined, not simply for the humanist reasons which might be persuasive in other universities, but out of a deep conviction that Christ calls his disciples both to know and to do. The tension is therefore not something to be resolved; it is rather something to be exploited. That house of which the author of the Book of Proverbs speaks, built of many rich and gaudy materials, stands as a unity composed of diverse parts. May we dare say it is an image of what Notre Dame is or aspires to be:

Wisdom has built herself a house;
She has erected her seven pillars....
She has dispatched her maidservants
And proclaimed from the city's heights:
"Who is ignorant? Let him step this way....
Come and eat my bread,
Drink the wine I have prepared.

Leave your folly and you will live,
Walk in the ways of perception.

Rev. Marvin R. O'Connell
Associate Professor of History

Sermon at Mass Inaugurating the Academic Year, September 16, 1973

Fellow Scholars of the University,
Brothers and Sisters in Christ:

It is time for us to consider our obligation at the University of Notre Dame to offer an education that is more than merely intellectual.

This has to be a place, of course, where knowledge is sought and shared, and where the intellectual virtues are cultivated which that search requires: honesty, patience, humility, doggedness, clarity, candor. Knowledge, however, is only one of the mind's endeavors, and if it is the only one that feeds and flourishes, it becomes a grotesque cancer which will sap the life from the other activities of the intellect that make an organically wise and hearty man. Notre Dame must, by our avowal, be a place where all the goods of the intellect are honored and offered. What I am most disquieted about today is the depth of our commitment to moral education.

There are scholars and departments here whose business it is to study ethical values, to explore social justice, to debate political theory, to probe the economic order, and to scrutinize religious beliefs. But what I am speaking about is distinguishable from study. It is the ardent advocacy of the moral values we are committed to, and the probing of those commitments: the work of no department, yet of every scholar.

Students who come to this campus should be walking into a crisscross of questions about the values we live by. Can the American formula for a democratic republic serve the needs of developing nations? Is a sexual relationship between a man and a woman right and proper only within marriage? Is organized labor working for the disadvantaged, or against them? Is abortion homicide? How consider one's lifework a service to the world if one must compete for profits? What adjustments is the family going to need when professional and educational opportunities are really made available to wives and mothers? What is honor? Does the development of military weapons preserve the peace or undermine it? These are all moral questions, and they probe at our values. They are not all matters we shall all agree upon. Indeed, by God's grace the Catholic tradition we spring from has not been spared vigorous disagreement and debate in its pursuit of truth, and we can expect a course no less argumentative. But the common pursuit, the readiness to reach, the ability to stand for things -- this we have a right to expect of every scholar at the University.

We are not really forced to this by the students. Their search for interpretation and value is often inarticulate and frustrated. Indeed, our task is often not so much to answer students' questions, as to draw them to ask enough questions so that the search may get underway.

Each era has its own needs, and we have seen a profound change of era. When those of us who sit here this morning came to college, students were soaked in a culture, from schools that impregnated them with values, and parents who somehow got across a few things they held precious and were working for. At Notre Dame this was so true that we may have been little challenged, so lulled were we by the apparent conformity of students to approved values by the time they arrived.

This is no longer the case. Parents and early teachers all too often want younger people to accept values and beliefs which they neither live by nor sacrifice for. Nonchalant homes and slothful schools have not been impressively effective at inculcating either intellectual or moral discipline. As for tradition, some students would not know one if it ran over them. Some students come to the University so value-deprived that they don't even rightly know what to rebel against.

The University had tended to be a place where the values brought firmly from one's family, ethnic background, religious training, early schooling, and social and economic status were to be jostled and riled, where unthought and inherited values were shaken and tested. But often now our raw material is no longer young people steeped in the Christian tradition. No longer can the major strategy of our liberal education take this kind of iron and tem-

per it into steel simply by the process of critical self-examination. The ore is gone, and yet our strategy is slow to change. Now it seems that we have to provide some of the values in the first place. The student now needs less to be shaken free of values than to be put together and guided into some personal and social commitments, even if they be tentative. For in our world, and our country, and our schools there is little vision. Many people do not believe much, now have a love to live and die for.

If we do take up the task of searching with students for the worth of things, we have to agree about who is to lead the search. Many have been presuming that these were matters best dealt with by the priests in the chapels and in the halls. As a priest who works and lives there, I welcome the charge as do the others of us, but not at the risk of taking it ultimately from the faculty. Students claim moral comment and moral example from the same persons who lead them in their quest for learning: from you, the teachers. The President must and will continue to give forthright moral leadership. The campus ministers and the student affairs staff have professional services of their own to offer students. But whether men and women graduate from this institution as adults or as moral troglodytes depends more upon you than upon all those others. We cannot have chaplains who know nothing about scholarships. Neither can we have scholars who have nothing to say about life's goods and their order. If the educators and the educational process of the University are not integrated, we shall surely have disintegrated graduates.

And the moral task is the task of all. Some professors, particularly if their own branch of scholarship has little direct affinity with value questions, may be tempted to consider themselves incompetent to assume the moral task, or exempted from it. Or they may even be resentful to be distracted by it from their academic work. Some even conceal their beliefs as a private affair which would only bring the objectivity of their studies into question if brought too near them. But if we accept this as a limit upon ourselves as teachers and scholars, we shall put forth students with disjointed and feckless minds, bewildered at what to do with all the learning we prize so much, at a loss to integrate heart and mind in this mad world. In the matter of values, the silence of a teacher makes a sound. By saying little, we teach that moral matters are not important, or are purely private, or that our own intellectual development is curiously unbalanced. That sort of attitude is directly related to the shabby public morals one sees in American public life in this year. There is, then no scholar who enjoys a right to be illiterate in value, in belief, in ethical concern.

This challenge, peculiarly yours, obliges you as faculty to find better ways for seeking, sharing, and enjoining beliefs and values with our students. Prior to that, perhaps we need to find how to stimulate more of this sort of conversation among ourselves. At lunch or at the library or the laboratory, we do from time to time fall to talking of these things, but never with any regularity like that which obliges us to discuss the issues of our respective scholarly disciplines.

Furthermore, we have very few strategies for sharing values with our students, at least none faintly as articulated as in our curriculum and academic program. It is all so hazard. Should there not be ways -- as systematically elaborated and tended as is the course of study at the University -- whereby the senior scholars at Notre Dame will expose, debate, and share their beliefs, values, hopes, and prayers with their younger colleagues? Why must learning be so open and published, while moral convictions and commitments are protected as if either improper for public sharing, or unable to support public examination?

I may be putting this as if it were an easy thing. This is terribly difficult, and terribly delicate. I trouble over it, and hope that what I try to put before you today is also a worry of yours. It is an essential feature of our educational mission, and of our obligation, to help students grow in what they prize, and what they believe, just as we help them grow in what they know, and how they learn. In these matters that tie mind to heart we have no satisfying consensus, not because we wrangle over them too much, but because we wrangle not enough. I put it to you that we have to look to this, and neither consign the task to delegates, nor wave it away as something foreign to our scholarly calling.

As witnesses to truth, we all seek to dispel the darkness of ignorance, to explain the unexplained, to get to the bottom of things. Is there not another side to witness, though, which brings others into contact with things that are bottomless? As Cardinal Suhard put it: "It has been well said that to be a witness does not mean to spread propaganda, or even to create an impression, but to create a mystery. It means living in such a way that one's life would be inexplicable, if God did not exist." To what extent, I wonder, do we, the explainers, lead lives that would, in this way, be inexplicable?

Rev. James Tunstead Burtchaell, C.S.C.

Computing Center Data

The attached statistics are provided as basic factual data on the Computing Center usage for the academic year, 1972-73. A great deal of care should be taken before making any interpretations of this data. If you have any questions regarding the information that follows, please contact the Director of the Computing Center, at extension 6547

Non-Terminal or "Batch" Computer services:

<u>Month</u>	<u>Total Jobs Run*</u>	<u>Total C.P.U. Time Hrs:Min:Sec:</u>	<u>Total Cards In</u>	<u>Total Pages Printed (lines/50)</u>
July	5851	129:47:54	2,071,729	215,184
August	7349	151:02:35	2,672,355	314,491
September	6882	152:16:25	2,333,215	264,326
October	9085	93:45:36	2,392,721	269,917
November	13429	182:17:34	2,659,386	351,393
December	13062	170:49:49	2,939,247	324,877
January	9681	222:46:43	2,879,857	347,869
February	11849	258:20:37	2,741,043	277,313
March	15191	286:33:14	3,336,945	373,596
April	15219	276:28:20	2,983,643	331,713
May	12624	260:29:24	3,044,480	321,619
June	9052	218:50:45	2,704,885	263,156
YTD	129,274	2,403:28:56	32,759,506	3,655,454

*Does not include a breakdown of jobs where may "jobs" are run as one computer job (i.e. WATFIV).

Terminal Computer Services:

<u>Month</u>	<u>Total User Logons</u>	<u>Total C.P.U. Time Hrs:Min:Sec:</u>	<u>Total Connect Time Hrs:Min:Sec:</u>	<u>Total Available Time Hrs. x phones (32)</u>
July	1360	12:44:00	915:11:26	5,024
August	700	6:54:28	403:26:01	5,088
September	4239	17:23:27	1752:46:51	8,960
October	7501	42:21:37	3917:57:33	10,000
November	6351	57:10:48	3187:28:55	9,792
December	4502	23:27:18	2190:36:25	8,480
January	2579	24:27:43	1093:19:35	7,008
February	5419	32:34:15	2531:10:56	9,024
March	4644	23:26:51	2552:10:28	9,904
April	5350	26:21:59	2936:18:56	8,944

May	2884	25:42:06	1832:28:52	8,928
June	1009	24:39:08	589:21:19	6,480
YTD**	46,538	317:13:45	23,902:25:27	97,632

YTD* Equals amounts since July 1, 1972

Batch and T.S.O. Combined
Computer Time (C.P.U.)
By Type of User
1972-73

<u>Month</u>	<u>Sponsored Research #1</u>	<u>University Sponsored Research #2</u>	<u>Instruction</u>
July	19:29:54	90:20:36	8:51:24
August	52:36:15	64:20:05	11:51:55
September	92:16:33	21:50:41	19:59:21
October	13:37:45	38:08:44	55:29:39
November	31:59:52	64:57:48	114:39:03
December	20:35:33	53:32:07	88:17:11
January	57:23:00	138:39:55	16:18:48
February	38:18:51	173:29:21	50:08:32
March	40:53:55	173:12:29	62:37:16
April	30:30:05	163:54:29	78:31:33
May	28:15:39	120:03:40	103:55:45
June	33:38:48	158:17:23	16:23:37
Year-to-Date	459:33:10	1260:46:58	627:07:03

per cent of total
1972-73 17 per cent 46.3 per cent 23 per cent

Comparison:
per cent of Total 71-72 7 per cent 74 per cent 9 per cent
per cent of Total 70-71 6.7 per cent 72.4 per cent 10.5 per cent

<u>Month</u>	<u>Computer Center General Support</u>	<u>Administrative</u>	<u>Outsider Users</u>	<u>Monthly Total</u>
July	5:19:16	18:13:57	0:16:12	142:31:53
August	24:43:06	4:00:25	0:24:78	157:57:04
September	6:55:54	28:02:07	0:35:16	169:39:52
October	9:00:59	19:38:19	0:11:56	136:07:12
November	7:07:58	20:19:49	0:23:52	239:28:22
December	7:01:56	24:35:08	0:15:14	194:17:09
January	7:51:27	26:24:34	0:36:42	247:14:26
February	6:38:00	21:48:18	0:31:50	290:54:52
March	9:38:42	22:37:38	1:00:04	310:00:04
April	8:57:26	20:17:40	0:39:06	302:50:19
May	6:39:45	21:52:14	5:24:27	286:11:30
June	9:04:25	22:54:26	3:11:15	243:29:54
Year-to-Date	88:44:03	271:00:00	13:31:12	2720:42:26

Total # of CPU hours used in 1972-1973 = 2720:42:26#4

per cent of total
1972-1973 3.2 per cent 10 per cent 0.5 per cent

Comparison:
per cent of Total 71-72 1.3 per cent 8.5 per cent .2 per cent
per cent of Total 70-71 2.0 per cent 7.6 per cent .8 per cent

- Notes: #1 Sponsored Research does not equal financial recovery due to the fact that many grants use more computer time than they have funds to pay for.
- #2 It appears that the first six months of 1972-73 reflect a period of time when the research users were adjusting from the 1107 to the 370/155 and consequently did not use as much time as they normally might have used.
- #3 It appears that the 370/155 is 3.69 times faster than the 1107 for C.P.U. bound jobs and generally over 10 times faster on I/O jobs.
- #4 The above C.P.U. Time reflects only the C.P.U. Time used by the application job

and does not include the multiprogramming operating system overhead which might be as much as 50 per cent of the application C.P.U. Time.

Student Usage of Computer Facilities 1972-1973

During the fall (1972) and spring (1973) semester a total of 2,824 individual students were enrolled in classes that required them to either program the computer or make use of pre-packaged routines. This amounted to 34 per cent of the University student (spring 1973) enrollment of 8,345 students. Some of these individual students were enrolled in more than one class that required them to make use of the computing facilities. The following table shows the distribution of students taking one or more classes:

<u>Students</u>	<u>Number of Classes</u>
1830	1
737	2
193	3
49	4
13	5
<u>2</u>	6

Total 2824

The distribution of students by college was as follows:

Arts and Letters	737
Business Administration	855
Engineering	261
Science	827
Undefined	<u>162</u>
Total	2,842

In identifying the above students it was found that they were registered in 97 courses (some having multiple sections) which represents 4 per cent of the 2,448 courses the Registrar's Office indicated were offered. These courses were offered by the following:

<u>College</u>	<u>No. of Courses</u>	<u>College</u>	<u>No. of Courses</u>
<u>Arts and Letters</u>		<u>Engineering</u>	
Economics	14	Electrical	6
Education	4	Chemical	4
English	3	Civil	5
History	1	Architecture	1
Psychology	8	Aerospace and	
Philosophy	1	Mechanical	<u>5</u>
Sociology and		College Total	21
Anthropology	<u>8</u>		
College Total	39	<u>Law</u>	1
<u>Business Administration</u>		<u>Science</u>	
Accountancy	1	Biology	6
Finance	1	Mathematics	6
Management	4	Physics	11
Marketing	1	Chemistry	<u>4</u>
MBA	<u>2</u>	College Total	27
College Total	9	Grand Total	<u>97</u>

Batch and T.S.O. Combined
C.P.U. Usage
By University Division
1972-1973

<u>Division</u>	<u>Sponsored Research</u>	<u>University Sponsored Research</u>	<u>Instruction</u>	<u>Computer Center General Support</u>
Arts and Letters	0:09:36	81:28:32	120:54:19	-
Science	246:51:45	536:52:17	256:52:09	-
Engineering	211:58:34	628:46:10	225:16:51	-
Business Administration	0:33:15	13:39:59	22:03:23	-
Law School	-	-	0:10:05	-
University Administration	-	-	1:50:16	-
Computer Center	-	-	-	88:44:03
Outside Users	-	-	-	-

Total University	459:33:10	1260:46:58	627:07:03	88:44:03
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<u>Division</u>	<u>Administrative</u>	<u>Outside Users</u>	<u>Total</u>
Arts and Letters	-	-	202:32:27
Science	-	-	1040:36:11
Engineering	-	-	1066:01:35
Business Administration	-	-	36:16:37
Law School	-	-	0:10:05
University Administration	271:00:00	-	272:50:16
Computer Center	-	-	88:44:03
Outside Users	-	13:31:12	13:31:12
Total University	271:00:00	13:31:12	2720:42:26

C.P.U. Usage as per cent of Categories Total

<u>Division</u>	<u>Sponsored Research</u>	<u>University Sponsored Research</u>	<u>Instruction</u>	<u>Computer Center General Support</u>
Arts and Letters	.1%	40.3%	59.6%	-
Science	23.7%	51.6%	24.7%	-
Engineering	19.8%	59. %	21.2%	-
Business Administration	1.4%	37.5%	61.1%	-
Law School	-	-	100. %	-
University Administration	-	-	.6%	-
Computer Center	-	-	-	100. %
Outside Users	-	-	-	-
Total University	17. %	46.3%	23. %	3.2%

<u>Division</u>	<u>Administrative</u>	<u>Outside Users</u>	<u>Total</u>
Arts and Letters	-	-	7.4%
Science	-	-	38.3%
Engineering	-	-	39.2%
Business Administration	-	-	1.3%
Law School	-	-	.1%
University Administration	99.4%	-	10. %
Computer Center	-	-	3.2%
Outside Users	-	100. %	.5%
Total University	10. %	.5%	100. %

Miss Marie Lawrence
Memorial Library
Social Sciences
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