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the university

Registration for Spring Semester, 1973

All students will register for the spring semester on Tuesday, January 16. Freshman registration will be in Stepan Center. All upperclass and graduate students must register in the North Dome of the Athletic and Convocation Center. All students must register in person.

Father Moreau's anniversary

On January 20; Holy Cross priests, brothers and sisters throughout the world will commemorate the 100th anniversary of the death of their founder, the Rev. Anthony Marie Moreau, C.S.C. Father Moreau died in LeMans, France, on Jan. 20, 1873.

Holy Cross parishes, schools, hospitals and other institutions around the world will join in a common observance of the anniversary of their founder's death. The central theme of the observance will be the unity Father Moreau planned for his "triplebranch" community of priests, brothers and sisters, and his vision of their service to persons in need wherever he found them.

To commemorate this anniversary, there will be a concelebrated mass at 10 a.m., January 20, in Sacred Heart Church. The principal celebrant and homilist will be the Most Rev. Mark S. McGrath, C.S.C., arch-

bishop of Panama. There will be a lunch at noon for members of the Holy Cross Community at Saint Mary's College. At 2 p.m., there will be an audiovisual presentation entitled "Basil Moreau -- His Charism" in Saint Mary's O'Laughlin Auditorium. Vespers, followed by a reception, will be held at 7:30 p.m. at the Holy Cross Brothers' Center. The public is invited to the Mass and to the audiovisual presentation, which has been specially prepared by the Holy Cross Sisters at Saint Mary's College and has also been written in French for presentation at major commemoration events in Canada and LeMans.

Credit Union "Crimefighters"

The University of Notre Dame Credit Union has joined the "Crimefighter Program" and is providing to all members free use of etching pencils for the safeguarding of personal property. The program is similar to Operation MARC endorsed by South Bend and area law enforcement agencies.

Equipment for marking property may be obtained in the Maintenance Building offices of the credit union at Notre Dame, and in the personnel offices of Saint Mary's College and Saint Joseph's Hospital.

Warning notices will be available to members for placement in windows and doorways to inform thieves that all items of value have been marked for ready identification. faculty notes

Miscellany

Dr. John G. Beverly, assistant professor of accountancy, presented a paper entitled "The Role of Account-Service in Cross Section Primary Segment Analysis at the Distribution Level" to the Michigan Chapter of the National Association of Accountants at their final 1972 Technical Session, Dec. 19 in Niles.

Dr. Milton Burton, professor emeritus and the first director of the Radiation Laboratory, is featured in the December issue of the Journal of Physical Chemistry. Published by the American Chemical Society, the journal is dedicated "in celebration of 25 years of radiation research at Notre Dame and in honor of Milton Burton on the occasion of his 70th birthday." The issue includes 39 papers delivered at a conference held at Notre Dame last April in honor of Burton. Dr. Thomas S. Fern, chairman of the Department of Art, spoke to faculty and students from the architecture and fine arts departments at the University of Southern California on Jan. 10. His lecture concerned unstructure art curricula.

Dr. Edward A. Kline, associate professor and Director of Graduate Studies in English, was music director of "The Joyful Sounds of Christmas," a concert of Christmas music ranging from medieval to modern and featuring the St. Matthew's Cathedral 42 voice choir, organ, brass quartet and tympani on Dec. 17 in the local Cathedral. Portions of the concert were video-taped and presented on WNDU-TV.

<u>Victor A. Schaefer</u>, director of special collections for the Memorial Library, has announced his resignation effective January 1. He had served from 1952 to 1966 as director of University Libraries and was promoted to emeritus status last year.

office of advanced studies

Information Circulars

The National Fellowships Fund The Whitney M. Young, Jr. Academic and Intern Fellowship Program, 1973-1974

NO. FY73-43

The National Fellowships Fund, acting for the Council of Southern Universities, Inc., and with funds from The Whitney M. Young, Jr. Memorial Foundation, is making approximately ten one-year fellowships available each year to develop leadership potential for those who can activate social progress.

The purpose of the awards is to fittingly memorialize Whitney M. Young, Jr. by providing training and developmental opportunities for others in the areas of his professional service and primary interests. Some of these areas are:

Interracial Cooperation

Social Services

Career Counseling and Training Programs

Human Resources

Communications (Mass Media)

Government and its Agencies in Relationships with Minorities

Corporate Social Responsibility in Relationships with Minorities

Two types of fellowships are being offered: academic and internship.

A. THE ACADEMIC FELLOWSHIP PROGRAM

The Foundation will award one-year academic fellowships annually to men and women who have already demonstrated successful experience in the broad area of interracial cooperation, but whose careers would benefit from further study at a point in their lives at which their potential leadership qualities need to be fully developed and refined. These fellowships might, in certain selected instances, be renewable for a maximum of one additional year.

Initial design of each program will be at the discretion of the individual applicant in consultation with advisors of his own choice, and his proposal for use of the year will be a major portion of his application. Proposals from promising candidates will be discussed and refined in negotiations between members of the selection panel and individual candidates. These proposals will be expected to include as a major component (but will not be restricted to) work in the broad field of social science: social work, sociology, psychology, political science, economics, and communications. In some instances, work may be undertaken in related fields that are of particular relevance to the candidates.

The emphasis throughout will be on the total individualization of a fellowship year to the needs and desires of younger people already committed to and active in interracial affairs.

B. THE INTERN FELLOWSHIP PROGRAM

The Intern Fellowship Program will provide young people with an opportunity to learn those skills which can best be learned by field experience. The field experience in this case would involve work with agencies and institutions which have a responsibility for serving and/or representing the human need; government agencies (federal, state and local), community organizations, labor organizations, business and industry, national or local urban leagues, religious organizations, corporations which have urban affairs and/or equal opportunity programs, United Nations agencies, and private foundations.

STIPENDS

Stipends will be adjusted according to need. Some corporation-nominated fellows may have their entire stipend funded by their employers. Corporation fellows will be funded at the same levels as other fellows of compara-





ble attainments and needs. Younger fellows who are primarily engaged in formal graduate study may be awarded grants of \$400 per month plus tuition. More mature fellows, dependent upon their current life style commitments, will be given stipends averaging about \$10,000/yr. A need and income assessment will be made after the award has been won.

Internship stipends will be adjusted to make allowances for the costs associated with the specific apprenticeship.

APPLICATION FORMS AND CALENDAR

One of the following procedures should be followed in making application:

 Prospective candidates may write directly to the Fund to obtain application forms.

> The National Fellowships Fund 795 Peachtree Street, N.E. Suite 484 Atlanta, Georgia 30308

 Candidates may be nominated by individuals or agencies. These individuals or agencies should provide pertinent information on the nominee and include adequate endorsement data on the person. The Fund will then send the application forms to these nominees.

The calendar for 1973-74 fellowships is:

| January 31, 19 | 73 - | | Filing |
|------------------------------|--------------|--------------|--------|
| and the second second second | | Applications | |
| April 15, 1973 | · ·_ | | of |
| | | Selections | |
| May 10, 1973 | · - | Deadline for | Filing |
| | e e Ten e | Acceptances. | |

Additional information is available in the Office of Advanced Studies, Division of Research and Sponsored Programs, Extension 7378.

Committee on International Exchange of Persons (Senior Fulbright-Hays Program) Paul-Henri Spaak Fellowships in Atlantic Studies

<u>NO. FY73-44</u>

The Presidentially-appointed Board of Foreign Scholarships has announced a special program of fellowships for 1973-74 honoring the memory of Paul-Henri Spaak, the first President of the United Nations General Assembly and one of the principal architects of the European Communities and the North Atlantic Treaty Organization. The fellowships are for younger American scholars in the humanities, social sciences, and related professions to engage in lecturing or research in Belgium, Luxembourg, and the Netherlands, and for younger scholars from these countries to lecture or conduct research at American institutions. Approximately five grants are available.

<u>AIM</u>: To promote scholarship in the humanities, social sciences and related professions with particular reference to Atlantic Studies.

<u>QUALIFICATIONS</u>: A candidate must be a citizen of Belgium, Luxembourg, the Netherlands or the United States, and should hold a doctorate or have appropriate professional qualifications. Preference will be given to candidates whose advanced training was completed within the past seven years.

<u>PERIOD</u>: Academic year 1973-74 or one semester thereof.

TERMS: \$12,000 for an academic year of nine months; \$6,000 for a single semester. Installments of the grant will be paid during its tenure. Except for regular health insurance coverage for the grantee, no additional grant benefits will be included.

<u>APPLICATION AND REVIEW PROCEDURES</u>: The applicant must submit his application to the appropriate authority of the country of which he is a citizen.

> Committee on International Exchange of Persons 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

Commission for Educational Exchange between the United States of America, Belgium, and Luxembourg 29, Boulevard du Regent, Regentlaan, Brussels, 1000.

United States Educational Foundation in the Netherlands Prinsengracht 919, Amsterdam.

Preliminary screening of American applicants will be by the Committee, which will forward nominations through the Department of State to the authorities in Belgium, Luxembourg, and the Netherlands and to the Board of Foreign Scholarships. The overseas authorities will forward panels of nationals for consideration by the agencies in Washington. Final selection of grantees will be made by the Board of Foreign Scholarships from the total list of candidates submitted by the participating countries.

CLOSING DATE OF APPLICATIONS BY AMERICAN-CITIZENS: January 22, 1973.

<u>AWARD DATE</u>: Recipients of grants will be notified of selection in early April 1973.

Graduate School

Woods Hole Oceanographic Institution Postdoctoral Awards in Ocean Study

NO. FY73-GS20

The Woods Hole Oceanographic Institution at Woods Hole, Massachusetts has announced its Postdoctoral Awards Program in Ocean Study for 1973. Woods Hole is interested in receiving applications from persons with nonoceanographic backgrounds as well as those specifically trained in the marine sciences and in ocean engineering.

PROGRAM

The postdoctoral awards provide an opportunity for recent doctorates in the sciences and engineering to become better acquainted with the field of oceanography and hopefully be stimulated to apply their skills toward a better understanding of the nature of the oceans. For the recent oceanography and ocean engineering graduates, the award provides an opportunity to broaden one's background through exposure to the wide spectrum of ocean problems being studied at the Institution. Applications are welcome from U.S. citizens and foreign nationals.

STIPENDS

Start at \$9,500 and are awarded for a period of one year. Limited additional support is also available for expendable equipment, supplies and services, and travel.

APPLICATION

Deadline, 15 February 1973. Awards are announced by 15 March, and recipients can begin their tenure anytime between April and November 1973.

Application forms may be obtained from the Office of Advanced Studies, Division of Research and Sponsored Programs or by writing to:

> The Fellowship Committee Woods Hole Oceanographic Committee Woods Hole, Massachusetts 02543

Department of Housing and Urban Development Graduate Urban Studies Fellowship Program, 1973-74

NO. FY73-GS21

The Urban Studies Fellowship Program, authorized under Section 802 of the Housing Act of 1964, as amended, is designed to increase the number of highly skilled practitioners in government management and planning available to States, counties, cities and multijurisdictional agencies. One year graduate Fellowships are granted in various urban and community development fields to students who are preparing for careers in public service.

Awards are made for graduate studies in programs oriented to public service careers in urban affairs and community development. Examples of acceptable fields of study are: urban and regional planning, urban affairs, urban sociology, urban economics, urban transportation, urban law, housing and urban renewal, community development, and public administration. Awards are normally not made in the fields of health studies and law enforcement.

ELIGIBLE APPLICANTS

Citizenship: Applicants must be (a) citizens of the United States or have applied for citizenship or (b) persons who have obtained a permanent residence visa.

Graduate Status: Consideration will be given only to individuals who are beginning full-time graduate studies, including first year Urban Law students, as of Fall 1973. Students who will have completed more than 4 credit hours by September 1, 1973, are ineligible for an award.

Students must be accepted or have applied for full-time graduate studies at an accredited U.S. graduate school leading to a Master's Degree. Exception: Urban Law applicants must be enrolling for their first year of study toward an L.L.B. or J.D. Degree. HUD will not support individuals enrolled in or enrolling in Doctoral programs.

Commitment to Public Service: Applicants must affirm, in writing, their intention to enter a career in State or local public service or in a nonprofit organization which has responsibility for housing and community development programs.

Candidates Already in Public Service or Eligible Nonprofit Agencies: HUD will consider for graduate support as full-time students candidates already in public service or employed by an eligible nonprofit agency. (However, an awardee who will continue to be in pay status will receive only tuition and fees and candidate's agency must be willing to allow awardee to attend school on a fulltime basis). Applicants working for any agency of the United States Government must resign their positions if they accept a HUD Fellowship Award. Applicants in the Armed Forces may apply if their period of service will result in discharge prior to commencement of the 1973-74 academic year.

BENEFITS

Duration of Awards: All awards will be made for one year only with no renewal option.

Tuition and Fees: Each Fellowship includes tuition and fees and a stipend and dependency allowance. Covered fees are those which are normally charged to a student by the institution (registration, matriculation, health fee, and other mandatory fees). Optional fees, such as parking, residence, optional health, optional insurance and costs for books and travel are not allowable.

Stipend and Dependency Allowance: Awards are made for a fixed maximum stipend of \$2700 for an individual without dependents and an additional \$500 per dependent (maximum of two dependents).

APPLICATION AND AWARD

Closing date for submission of applications is January 31, 1973.

Awards will be announced in April, 1973.

Application material is available in the Office of Advanced Studies, Division of Research and Sponsored Programs, Extension 7378.

Current Publications and Other Scholarly Works

ARTS AND LETTERS HUMANISTIC AND SOCIAL STUDIES

Education

Meany, J.O. 1972. Man-machine alternatives in computer-based counselor training systems. <u>Counselor Education and Supervi-</u> <u>sion</u> 12(2):115-122.

Government and International Studies

Bartholomew, P.C. 1972. Public administration, 3rd ed. Littlefield, Adams and Company, Totowa, New Jersey. xiv + 152pp.

Sociology and Anthropology

Liu, W.T., I.R. Hutchison, and L.K. Hong. 1972. The structural significance of conjugal power measures. Pages 160-177 <u>in</u> M. Sussman and B. Cogswell, editors, Cross-National Family Research. E.J. Brill, Inc., Leiden, The Netherlands.

ENGINEERING

Chemical Engineering

Verhoff, F.H., and J.T. Banchero. 1972. A note on the equilibrium partial pressures of vapors above sulfuric acid solutions. <u>American Institute of Chemical Engineers</u> Journal 18:1265-1268.

Civil Engineering

Tenney, M.W., W.F. Echelberger, Jr., K.J. Guter, and J.B. Carberry. 1972. Nutrient removal from wastewater by biological treatment methods. Chapter 13, pages 391-419 in H.E. Allen and J.R. Kramer, editors, Nutrients in Natural Waters. John Wiley and Sons.

SCIENCE

Biology

- Fuchs, M.S., and E.A. Hiss. 1972. The effect of matrone on oviposition in the mosquito, <u>Aedes aegypti</u>. <u>Journal of</u> <u>Insect Physiology</u> 18:2217-2227. Trpis, M. 1972. Development and predatory
- Trpis, M. 1972. Development and predatory behavior of <u>Toxorhynchites brevipalpis</u> (<u>Diptera: Culicidae</u>) in relation to temperature. <u>Environmental Entomology</u> 1(5):537-546.

Chemistry

Eliel, E.L. 1972. Conformational analysis in heterocyclic systems: recent results and applications. <u>Angewandte Chemie</u>, International Edition in English 11(9): 739-750.

Mathematics

Gerstein, L.J. 1972. The growth of class numbers of quadratic forms. <u>American</u> <u>Journal of Mathematics</u> 94(1):221-236. Goetz, A. 1971. On various Boolean struc-

tures in a given Boolean algebra. <u>Publi-</u> cationes Mathematicae 18:103-107.

Monthly Summary

Awards Received

| | | IN THE MONTH OF DECEMBER, 1972 | | |
|---------------------------------|----------------------------------|--|--|---------------------------------|
| Department or Office Pi | rincipal | <u>Short title</u> | <u>Sponsor</u> | Amount-\$ term |
| | | AWARDS FOR RESEARCH | | |
| Chemical Ve Eng. | erhoff | Biological modeling of rivers | Tri-County Conservancy | 1,500 3 mos. |
| | reeman | Grant-in-aid | Daniel J. Pasto | 200 |
| Microbiology- Po Lobund Lab. | ollard | Cancer research | LaPorte Commun. Cancer Assn., Natl. Sci. | 3,000 Inc. 1 yr. |
| | hephard, Poirier | High energy elementary particle physics | Fdtn. | 275,000 1 yr. |
| Eng. | ohn | Binary and ternary hydrocarbon systems | Natl. Sci. Fdtn. | <u>1 yr.</u> 29,100 1 yr. |
| | agee | Effects of radiation on matter | U.S. Atomic Energy Comm. | 1,112,000 1 yr. |
| Philosophy Ca | aponigri | Translation of Xavier Zubiri's Sobre la esencia | s Littauer Fdtn. | 805 |
| | AWA | RD FOR FACILITIES AND EQUIPMENT | | |
| Radiation Lab. M | agee | Effects of radiation on matter | U.S. Atomic Energy Comm. | 110,000 1 yr. |
| | A | WARDS FOR EDUCATIONAL PROGRAMS | | |
| Man | aus, <u>Santos</u> iorindo | Government, the family and the aging Seminar program | Indiana Comm. Humanities Ames Res. Lab. | 5,925 6 mos. 500 |
| | | AWARD FOR SERVICE PROGRAM | Miles Lab. | <u>1 yr.</u> |
| Inst. Urban B Studies | roden | Youth advocacy program | Educ. Systems Corp. | 13,413 |

Proposals Submitted

IN THE MONTH OF DECEMBER, 1972

| Department or Office | <u>Principal</u> | <u>Short title</u> | <u>Sponsor</u> | Amount-\$ term |
|----------------------------|------------------|---|-----------------------|-------------------|
| | | PROPOSALS FOR RESEARCH | | |
| Chemistry | Bretthauer | Synthesis of yeast mannans from guanosine diphosphate mannose | Natl. Sci. Fdtn. | 71,778 3 yr. |
| Memorial Library | Sparks | Mexican-American information network (MAIN) | Natl. Endow. Human | 14,069 1 yr. |
| Philosophy | Manier | Charles Darwin: Metaphysics and morals | Natl. Endow. Human | 17,114 14 mos. |
| Metallurgy | Fiore | Ultrasonic studies of microstructure | U.S. Army, ARO-D | 68,940 2 yr. |
| Aerospace Mechanical Er | Biles ng. | Improved techniques for simulation | Natl. Sci. Fdtn. | 52,253 2 yr. |
| Architecture | Horsbrugh | The urban littoral: the appeal of water | Natl. Endow. Arts | 60,553 16 mos |
| Biology | Fuchs | Reproductive physiology of <u>Aedes</u> | Natl. Inst. Health | 41,687 1 yr. |
| Mathematics | 0'Meara | Mathematical algebra | Natl. Sci. Fdtn. | 52,967 1 yr. |
| Biology | Crovello | Systematic and evolutionary studies in the brassicaceae | Natl. Sci. Fdtn. | 227,321 5 yr. |

| Philosophy | Sayre | Medical ethics | Natl. Sci. Fdtn. | 60,232 19 mos. | |
|-------------------------|-----------|---|--------------------------|---------------------------|--|
| Biology | Rai | Mosquito biology: Genetic, organismic, environmental | Natl. Inst. Health | 42,125 1 yr. | |
| Civil | Tenney | Eutrophic lake reclamation | Environ. Prot. Agency | 73,615 1 yr. | |
| Biology | Weinstein | Parasitology: Biochemical, developmental aenetic | Natl. Inst. Health | 58,988 | |
| Marketing Management | Furuhashi | Multinational corporations of Japanese origin | (Through DPRD) | 1 yr. 14,738 8 mos. | |
| | | PROPOSAL FOR FACILITIES AND EQUIPMENT | • | | |
| Chemistry | Nowak | Magnetic resonance studies of phosphoenolpyruvate | Research Corp. | 9,000 1 yr. | |
| | | PROPOSALS FOR EDUCATIONAL PROGRAMS | | | |
| Government | Daley | Study and travel program in Africa | (Through DPRD) | 3,190 3 mos. | |
| College Arts Letters | Crosson | Conference on Carl Jung and higher education | Wickes Fdtn. | 9,889 | |
| Collegiate Seminar | Oesterle | Collegiate seminar workshop | Uniroyal, Inc. | 5,000 3 mos. | |
| English | Collins | Summer seminar for college teachers-fiction as art | Natl. Endow. Human. | 39,510 5 mos. | |
| | | PROPOSAL FOR SERVICE PROGRAMS | | | |
| Inst. Urban Studies | Broden | Youth advocacy training | Soc. Rehabil. Serv. | 25,000 1 yr. | |

Summary of Awards Received and Proposals Submitted

IN THE MONTH OF DECEMBER, 1972

AWARDS RECEIVED

| Category | Renewal No. Amount | New <u>No. Amount</u> | Total <u>No. Amount</u> |
|--|-------------------------------------|--|---|
| Research Facilities and Equipment Educational Programs Service Programs | 3 \$1,390,000 1 110,000 1 500 | 4 \$ 31,605 1 5,925 1 13,413 | 7 \$1,421,605 1 110,000 2 6,425 1 13,413 |
| Total | 5 \$1,500,500 | $\frac{1}{6}$ $\frac{13,413}{50,943}$ | $\frac{1}{11}$ $\frac{13,413}{$1,551,443}$ |

PROPOSALS SUBMITTED

| | Renewal | | New | | Total | | |
|---|---|---|-----|---|-------|--------------------------------|---|
| Category | No. | Amount | No. | Amount | | No. | Amount |
| Research Facilities and Equipment Educational Programs Service Programs Total | $\begin{array}{c} 6 \\ - \\ 1 \\ \frac{1}{8} \\ \overline{\$} \\ \overline{\$} \end{array}$ | 5 286,496 5,000 25,000 5 316,496 | | 569,884 9,000 52,589 631,473 | | 14 1 4 <u>1</u> 20 | \$ 856,380 9,000 57,589 25,000 \$ 947,969 |



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James W. Frick Vice President Dean Joseph C. Hogan College of Engineering Box 309 Notre Dame, Ind. 46556

notre dame report

An official publication published fortnightly by the University of Notre Dame, Department of Information

Vol. 2, No. 9

January 12, 1973



Services. Individual copies are available in the Notre Dame Hammes Bookstore at 30 cents. Mail subscriptions are \$6 an academic year. Back copies are 50 cents each.

Mary Catherine Stevens, Editor Publications Office, 209 Administration Building Notre Dame, Indiana 46556 219:283-1234