


THE JOHNS HOPKINS UNIVERSITY
BALTIMORE, MARYLAND

Conferring of Degrees
at the close of the ninety-first academic year



JUNE 13, 1967
Keyser Quadrangle
Homewood



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ORDER OF PROCESSION

The Graduates

Marshals

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ROBERT E. GREEN, JR.	JOHN H. MULHOLLAND
JOHN W. GRYDER	OWEN M. PHILLIPS
ALFRED M. HAYNES	PHILIP B. TAYLOR
BLAIR KINSMAN	CHARLES A. THOMAS

CHARLES R. WESTGATE

*

The Faculties

Marshals

SAUL ROSEMAN and JOHN WALTON

*

The Deans, The Trustees and Honored Guests

Marshals

FERDINAND HAMBURGER and ALSOPH H. CORWIN

*

The Chaplain

The Vice President of the Board of Trustees

The Vice President and Provost

The President of the University

Chief Marshal

CHARLES S. SINGLETON

*

For the Presentation of Diplomas

Marshals

KELSO W. MORRILL	ALVIN NASON
EDWIN S. MILLS	WILLIAM POOLE

*

The ushers are members of the Undergraduate Student Body

ORDER OF EVENTS

Milton Stover Eisenhower, President of the University, presiding

PROCESSIONAL

GRAND MARCH FROM "TANNHAUSER" — RICHARD WAGNER

John H. Eltermann, Organist

The audience is requested to stand as the Academic Procession moves into the area and to remain standing until after the Invocation and the singing of the University Ode

*

INVOCATION

Chester L. Wickwire

Executive Secretary, The Levering Hall YMCA

*

THE STAR-SPANGLED BANNER

THE UNIVERSITY ODE

*

GREETINGS

Robert D. Harvey

Vice-Chairman of the Board of Trustees

*

ADDRESS

Milton Stover Eisenhower

President of the University

*

SPECIAL ANNOUNCEMENT

William Bevan

Vice-President and Provost

*

CONFERRING OF DEGREES ON CANDIDATES

Presented by Allyn W. Kimball,

Dean, Faculty of Arts and Sciences

BACHELORS OF ARTS

BACHELORS OF ENGINEERING SCIENCE

ORDER OF EVENTS

CONFERRING OF DEGREES ON CANDIDATES

Continued

*Presented by Richard A. Mumma,
Dean, Evening College*

BACHELORS OF SCIENCE • BACHELORS OF SCIENCE IN NURSING
BACHELORS OF SCIENCE IN ENGINEERING
MASTERS OF SCIENCE IN ENGINEERING
MASTERS OF SCIENCE • MASTERS OF EDUCATION
MASTERS OF LIBERAL ARTS
CERTIFICATES OF ADVANCED STUDY IN EDUCATION

*Presented by Ernest L. Stebbins,
Dean, School of Hygiene and Public Health*

MASTERS OF SCIENCE • DOCTORS OF SCIENCE
MASTERS OF PUBLIC HEALTH • DOCTORS OF PUBLIC HEALTH
DOCTORS OF PHILOSOPHY

*Presented by Francis O. Wilcox,
Dean, School of Advanced International Studies*

MASTERS OF ARTS
DOCTORS OF PHILOSOPHY

*Presented by Thomas B. Turner,
Dean, School of Medicine*

DOCTORS OF MEDICINE
MASTERS OF ARTS • DOCTORS OF PHILOSOPHY

*Presented by Allyn W. Kimball,
Dean, Faculty of Arts and Sciences*

MASTERS OF SCIENCE IN ENGINEERING • MASTERS OF ARTS IN TEACHING
MASTERS OF ARTS • DOCTORS OF PHILOSOPHY

*

BENEDICTION

*

RECESSIONAL

GRAND MARCH FROM "SIGURD JORSALFAR" — EDWARD GRIEG

*The audience is requested to remain standing after the Benediction until
the members of the faculties and the graduates have left the area.*

The Alumni Association of The Johns Hopkins University invites all graduates, their relatives and friends, and the members of the faculties to attend a reception on Keyser Quadrangle immediately following the recessional. In case of rain the reception will be held in Levering Hall.

AWARDS

The Avis and Alexander R. Butler Award in History for the best essays written by graduate students.

Awarded to: ROBERT W. SHORHOUSE
HAROLD C. LIVESAY

The Sarah and Adolph Roseman Achievement Award in Chemistry in recognition of outstanding accomplishment.

Awarded to: EDWARD F. HAYES

The C. Richard Martin Award in Political Economy for outstanding work by a first or second year graduate student.

Awarded to: ERNST BALTENSPERGER

The Julius Turner Award for the best senior thesis in Political Science.

Awarded to: ROBERT E. O'CONNOR

*

THE UNIVERSITY MACE

The University Mace carried by the Chief Marshal, Professor CHARLES S. SINGLETON, was first used at the 1954 Commemoration Day Exercises. Eight symbols are hand wrought in sterling silver on an ebony staff. The symbols represent man's cultural development from ancient times, through the Middle Ages and the Renaissance, to the modern era.

THE PRESIDENTIAL INSIGNIA

University President MILTON S. EISENHOWER is wearing the Presidential Insignia signifying the authority vested in the President by the Board of Trustees. It is a chain of sterling silver links worn around the neck. Portraits of each of the eight Johns Hopkins University presidents are engraved on the faces of eight of the links. On the reverse are engraved the names and dates of office of each President. Twelve blank links for future use are included. The University Seal completes the design.

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REYNOLDS CLARK GRAVES, of Mountain Lakes, N. J.
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 MICHAEL JOSEPH MILLER, of Baltimore, Md.
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 RALPH MARVIN MOSKOWITZ, of Burlingame, Calif.
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 PHILIP MARK PARTHEMORE, of Villanova, Pa.
 WILLIAM ARTHUR PATTEN, of Cuttingsville, Vt.
 BARRY LEE PAXTON, of Greensburg, Pa.
 ROBERT GEORGE PECOR, of Greenbelt, Md.

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 MARK PRAGER, of Yonkers, N. Y.
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 CECIL GARY REINESS, of McKeesport, Pa.
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 DAVID ANGELO RICCI, of Evanston, Ill.
 ROBERT ALLAN RIZZA, of Maitland, Fla.
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 ANTHONY ASTA ROMEO, of Baltimore, Md.
 BRAD MICHAEL ROTHKOPF, of Wyncote, Pa.
 JOHN CARLOS ROWE, of Los Angeles, Calif.
 IVOR ROYSTON, of Silver Spring, Md.
 EDWIN STEPHEN RUBENSTEIN, of Baltimore, Md.
 MORTON JEROME RUBENSTEIN, of Baltimore, Md.
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 JUDAH PHILIP RUBINSTEIN, of Baltimore, Md.
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 JOSEPH H. SACK, of Pittsburgh, Pa.
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 HOWARD MARK SANDLER, of Pikesville, Md.
 DAVID DORN SAPERSTEIN, of New York, N. Y.
 WILLIAM QUIRK SARGENT, of Tulsa, Okla.
 WILLIAM ZIEGLER SCHENCK, of Titusville, Fla.
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 GARY ALLAN SCHREIBER, of Baltimore, Md.
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 THOMAS FRANKLIN SEIF, of Baltimore, Md.
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 STEVEN LAWRENCE SINN, of Great Neck, N. Y.
 JOEL HARRIS SIRKIN, of Hewlett, N. Y.
 JOHN KERNAN SLINGLUFF, Jr., of Baltimore, Md.
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 CHESLEIGH BONINE SNOW, of Allentown, Pa.
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 GEORGE ANDREW SOLLI, of Towson, Md.
 STEFAN ELLIS SOMMERFIELD, of Bronxville, N. Y.
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 THOMAS MICHAEL SOUDERS, of Great Falls, Va.
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 DOUGLAS EUGENE TELL, of Twin Falls, Idaho
 MASON LEE TERRY, of Kilgore, Texas
 DAVID LEVON TERZIAN, of Kensington, Md.
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 MARC ARNOLD THOMAS, of Elmira, N. Y.
 RICHARD BRUCE THOMAS, of Weston, Mass.
 DAVID JOHN THOMPSON, of Mariemont, Ohio
 JOHN THORNTON, of Succasunna, N. J.
 RICHARD ALBERT TOMASULO, of Coral Gables, Fla.
 PETER LEADBETTER TRIPP, of Greenwich, Conn.
 DONALD LYNN TRUMP, of Hudson, N. Y.
 JOEL MITCHELL VAVICH, of Tucson, Ariz.
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 JEFFREY CHARLES WEIDIG, of Atlantic City, N. J.
 ARTHUR WALLACE WEINMAN, of Ft. Worth, Texas
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 ROBERT PAUL WHITEHEAD, of Silver Spring, Md.
 ROBERT ELMER WILSON, Jr., of Silver Spring, Md.
 GREGORY ROMMEL WISE, of Baltimore, Md.
 THOMAS SCOFIELD WOLMAN, of New York, N. Y.
 WILLIAM HAVERLY WRIGHT, Jr., of Cincinnati, Ohio
 LYN JULIAN YAFFE, of Baltimore, Md.
 ROBERT BRUCE YANKOWITZ, of New Rochelle, N. Y.
 MICHAEL WILLIAM YODIN, of Teaneck, N. J.
 ROBERT HARRY ZEFFERT, of Baltimore, Md.
 JAMES DALE ZEVELY, of La Jolla, Calif.

(307)

Graduating with Departmental Honors

LEON GILBERT BARNHART
WILLIAM TED BROWN
JOHN WILLIAM CHOTT, JR.
ALEXANDER EUGENE DAVIDOFF
DANIEL BRUCE EISENBERG
RICHARD PAUL ELINSON
GERALD MYRON FELDMAN
BARRY EDWARD GOOZNER
MICHAEL BENJAMIN GROSS
RICHARD ALLEN HAYS, JR.
WILLIAM SCOTT JAMES, JR.
MILTON KOTELCHUCK
JACK MARION LOOMIS
JONATHAN ALLEN LOWE

Philosophy
Biology
History
Psychology
Romance Languages
Biology
International Studies
Chemistry
Mathematics
Political Science
Biology
Psychology
Psychology
International Studies

DOUGLAS KENT MACLEAR
STEPHEN NIEL MARGULIES
ROBERT EMMETT O'CONNOR
PETER STEVENS ONUF
JAMES PRESTON PUSACK
CECIL GARY REINESS
ROBERT IRWIN SACHS
NICHOLAS ALDEN SALATTI
LAWRENCE OSCAR SCHER
EDWARD ARTHUR STERN
FREDERICK SLEDGE STINSON
JAMES WILLIAM TAPE
STEPHEN RAOUL TARGAN

Education
English
Political Science
History
German
Chemistry
Biology
Physics
Classics
Political Economy
Psychology
Physics
Biology

Graduating with General Honors

LEON GILBERT BARNHART
DAVID LEE BOUWMAN
ROBERT JOSEPH BRAUER
WILLIAM TED BROWN
JOHN HUBERT CHAFFEE
JOHN WILLIAM CHOTT, JR.
HENRY SALUM COHN
SANFORD JAY COHN
LEWIS DENNIS CYLUS
ALEXANDER EUGENE DAVIDOFF
GARY WILLIAM DAVIS
JONATHAN ERIC DEITZ
JOSEPH L. DEVITIS
PABLO JOSE DROBNY
PAUL J. EISENBARTH
DANIEL BRUCE EISENBERG
RICHARD PAUL ELINSON
BARRY LESLIE FARBER
MICHAEL MAX J. FISCHER
BARRY EDWARD GOOZNER
MICHAEL BENJAMIN GROSS
CHARLES EUGENE HALM, JR.
JEFFERSON OGDEN HAMILTON
DAVID MARK HESS
RICHARD HAROLD HOCHMAN
ERIC HAROLD HOFFMAN
JACK DONALD HORTON
CHARLES J. JAFFE
MILTON KOTELCHUCK
JOHN ERNEST KRATZ, JR.
STEPHEN RONALD LEVINSON
DAVID VAN CLEAVE LINCICOME
EUGENE WILLIAM LINFORS

JACK MARION LOOMIS
JONATHAN ALLEN LOWE
DOUGLAS KENT MACLEAR
WILLIAM JOHN MAHANNAH, II
STEPHEN NIEL MARGULIES
JEFFREY LOWELL MARSH
STEVEN ARTHUR MASON
WILLIAM EDWARD MCAULIFFE
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JAMES FRANK MONGIARDO
W. JAMES MORRISON
STANLEY MURAVCHICK
ROBERT EMMETT O'CONNOR
PETER STEVENS ONUF
JAMES PRESTON PUSACK
CECIL GARY REINESS
BRAD MICHAEL ROTHKOPF
JOHN CARLOS ROWE
IVOR ROYSTON
EDWIN STEPHEN RUBENSTEIN
MORTON JEROME RUBENSTEIN
LAWRENCE OSCAR SCHER
ALFRED HAMILTON SIEMON, II
JOEL HARRIS SIRKIN
CHESLEIGH BONINE SNOW
EDWARD ARTHUR STERN
JAMES WILLIAM TAPE
STEPHEN RAOUL TARGAN
BERNARD SPENCER THOMAS, JR.
DONALD LYNN TRUMP
JOEL MITCHELL VAVICH
MARC ALLAN WHALEY
ROBERT BRUCE YANKOWITZ

BACHELORS OF ENGINEERING SCIENCE

DONALD LAMAR BIERLY, JR., of Towson, Md.
RONALD WILLIAM BOUNDS, of Baltimore, Md.
WILLIAM FRANCIS BRAMER, of Aberdeen, Md.
JONATHAN FRANKLIN BROWN, of Chevy Chase, Md.
ROBERT ALAN BUHRMAN, of Smithsburg, Md.
WILLIAM OLIVER CAMP, JR., of Baldwin, Md.
RICHARD DAVID CARLSON, of Hartford, Conn.
PAUL HOWARD CHANDLER, of Oxon Hill, Md.
DAVID J. CURTIN, of Yonkers, N. Y.
LEROY EDWARD DEPKIN, JR., of Baltimore, Md.
JOHN LUCIEN FALCONER, of Baltimore, Md.
ANTHONY LOUIS FARINACCI, of Baltimore, Md.
DAVID GERSON FRANKEL, of Baltimore, Md.
THOMAS DAVID GAEBE, of Glen Burnie, Md.
BERNARD D. GELLER, of Baltimore, Md.
WILLIAM KENNETH GEORGE, JR., of Cambridge, Md.
JAMES ROBERT GOHLKE, of Seaford, Del.
RICHARD OLIVER GORDON, JR., of Richmond, Va.
JOHN WALTER HARMAN, of Accident, Md.
FRED STUART HODGSON, of Cedar Grove, N. J.
VIRGIL ROBERT HOUSEHOLDER, JR., of Hagerstown, Md.
MARVIN ORRY JACOBS, of Baltimore, Md.
TIMOTHY OGDEN JONES, of Milwaukee, Wis.
HENRY DAVID KAHN, of Chevy Chase, Md.
DAVID VICTOR KALBAUGH, of Westernport, Md.
GORDON STEWART KERR, of Baltimore, Md.
DENNIS LEE KNEPP, of Baltimore, Md.
BENJAMIN WILLIAM LANDRUM, JR., of Cambridge, Md.

KENNETH WARREN LARSEN, of Ridgewood, N. J.
STEPHIEEN BARNARD LAYTON, of Coatesville, Pa.
ROBERT CRAIG LEEDOM, of Salisbury, Md.
MICHAEL IVAN LIEBMAN, of Baltimore, Md.
MIKLOS FERENC LOSONCZY, of Arlington, Va.
JOHN FREDERICK MALM, of New Orleans, La.
ROBERT WILLIAM MESSMER, of Cumberland, Md.
GERALD KEITH MOORE, of Earleville, Md.
CARROLL WESLEY NEWCOMB, JR., of Neavitt, Md.
RICHARD JOSEPH NOZEMACK, of Baltimore, Md.
LEONARD DONALD OCIS, of Baltimore, Md.
ANTHONY FRED PALUMBO, JR., of Bloomfield, N. J.
GARY FREDERICK PHELPS, of Baltimore, Md.
DENNIS ROY PODOLNY, of Manchester, Conn.
STEPHIEEN MARTIN RHODS, of Albuquerque, N. Mex.
DAVID LEE RODKEY, of Kensington, Md.
GEORGE JOHN SMIDT, of Baltimore, Md.
RICHARD BARRY SPINAK, of Pocomoke City, Md.
ROBERT LOUIS STOZEK, of Baltimore, Md.
RALPH WARNER SWAIN, of Morris Plains, N. J.
STEPHEN LEONARD TAYLOR, of Huntington, W. Va.
ANDREW GUNNAR VASKIS, of Baltimore, Md.
BRUCE BRILL WHITAKER, of Baltimore, Md.
RAYMOND CASIMIR WIER, JR., of Wellesley, Mass.
JOHN MICHAEL WILDES, of Cape Porpoise, Maine
FREDERIC KENSING WISEMAN, of Darien, Conn.
MICHAEL JEFFREY ZINNER, of Coral Gables, Fla.

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Graduating with Departmental Honors

ROBERT ALAN BUHRMAN
JOHN LUCIEN FALCONER
DAVID VICTOR KALBAUGH
MIKLOS FERENC LOSONCZY

Engineering Physics
Chemical Engineering
Engineering Science
Chemical Engineering

DAVID LEE RODKEY
RALPH WARNER SWAIN
JOHN MICHAEL WILDES

Electrical Engineering
Mechanics
Electrical Engineering

Graduating with General Honors

ROBERT ALAN BUHRMAN
WILLIAM OLIVER CAMP, JR.
JOHN LUCIEN FALCONER
DAVID VICTOR KALBAUGH

MIKLOS FERENC LOSONCZY
DAVID LEE RODKEY
RALPH WARNER SWAIN
JOHN MICHAEL WILDES

BACHELORS OF SCIENCE

MORTON ABRAHAMS, of Baltimore, Md.
THOMAS YEWELL AIKEN, of Baltimore, Md.
SANDRA ANN JOANNES ANTOINE, of Baltimore, Md.
LESTER EDWIN ARNOLD, JR., of Baltimore, Md.
RICHARD POST BARNS, of Baltimore, Md.
VIOLET V. BAUER, of Baltimore, Md.
JOSEPH ANTHONY BOJANOSKI, of Edgewood, Md.
DAVID ROBERT BOLLING, of Baltimore, Md.

HERBERT EDMUND BRENT, of Baltimore, Md.
PATSY RUTH MURNANE BROOKS, of Laurel, Md.
HAROLD NORVELL BRYANT, of Baltimore, Md.
MARY CROMWELL BUCK, of Baltimore, Md.
MIRIAM BURKE, of Baltimore, Md.
ROBERT DUANE BUROW, of Lutherville, Md.
DONALD CLAIBORNE CALDWELL, of Baltimore, Md.
ALFRED ALPHONSE CAMPO, of Fallston, Md.

JOYCE MUSGRAVE CANTER, of Baltimore, Md.
 MELVIN LLOYD CARROLL, of Baltimore, Md.
 RUTH KEELE BROOKS CHAPIN, of Baltimore, Md.
 THOMAS WEST CLAGGETT III, of Salisbury, Md.
 JOANN L. HILT CLARK, of Baltimore, Md.
 LUCILLE RICHEY COLEMAN, of Baltimore, Md.
 DONALD LEROY DAVIDSON, of Baltimore, Md.
 WILLIAM HENRY DENNIS, JR., of Baltimore, Md.
 ROBERT DE WINGAERDE, of Baltimore, Md.
 MURTHA VINCENT DONOVAN, JR., of Baltimore, Md.
 THOMAS FRANCIS DUFFY, of Newark, Del.
 EDITH LIPSITZ ENTEN, of Baltimore, Md.
 GRACE MASTERS EVANS, of Owings Mills, Md.
 JOSEPH LOUIS FELDER, of Baltimore, Md.
 BARBARA MARY FENRICH, of Baltimore, Md.
 JOHN ALTON FITCH, JR., of Ellicott City, Md.
 AUDREY MAE FORBES, of Baltimore, Md.
 JAMES SCOTT FORSTER, of Baltimore, Md.
 MICHAEL OTTO FOX, of Cockeysville, Md.
 BARBARA DOUVILLE FRAZIER, of Baltimore, Md.
 LINSNER THOMAS FREITAG, of Baltimore, Md.
 ROBERT ALOYSIOUS GALLAGHER, of Baltimore, Md.
 ANNE FINLAY JOHNSTON GONZALEZ, of Baltimore, Md.
 PAUL FRANCIS GOREY, of Baltimore, Md.
 WALTER JEROME GRABOWSKI, of Baltimore, Md.
 RAMON JEROME HACKER, of Ellicott City, Md.
 MARGARET CORLISS HAMPT, of Baltimore, Md.
 LAWRENCE CHARLES HANRATTY, of Baltimore, Md.
 ELEANOR TOMLIN HELMS HANSON, of Baltimore, Md.
 JESSIE PLEDGER HODGES, of Baltimore, Md.
 GEORGE JACOB HOEFELICH III, of Baldwin, Md.
 MARY LORD HOFFMAN, of Aberdeen, Md.
 IRENE CHENETTE HÖLLJES, of Baltimore, Md.
 AUSTIN HOLZER, JR., of Baltimore, Md.
 LUCY BURKETT HOOPES, of Baltimore, Md.
 MARY WASYL CZUK HRABEC, of Chesapeake City, Md.
 WALTER FRANCIS HULSE, JR., of Baltimore, Md.
 BESSIE MAE FERRELL HYTHE, of Baltimore, Md.
 GEORGE CALVIN JUNGBLUT, of Baltimore, Md.
 KATHLEEN HUPFELDT KIDD, of Baltimore, Md.
 ANDREW M. KONJURA, of Joppa, Md.
 DONALD DEAN LOCHARY, of Baltimore, Md.
 LAURENCE ARYAH LEBOVIC, of Baltimore, Md.
 FRANKLIN CHARLES MACAULEY, of Baltimore, Md.

ROBERT CALDER MACKENZIE, of Owings Mills, Md.
 DOROTHY KELLY MCARDLE, of Bowie, Md.
 DONALD JOSEPH MCGINNIS, of Baltimore, Md.
 ROBERT WESTON MCKENNEY, JR., of Timonium, Md.
 STEPHEN NORVELL MCKINNEY, of North East, Md.
 ALGER PETER MEIDUNAS, of Baltimore, Md.
 EVELYNNE FROHMAN MEYERSON, of Baltimore, Md.
 WILLIAM JOSEPH MILLER, of Baltimore, Md.
 KARLHEINZ MOCK, of Bel Air, Md.
 ALMA MARIE MULES, of Baltimore, Md.
 JOSEPH P. NAPORA, JR., of Baltimore, Md.
 ROBERT BRUCE NOLAN, of Baltimore, Md.
 ANNE JANE O'BRIEN, of Glen Burnie, Md.
 GEORGE WILLIAM PARKER, of Baltimore, Md.
 RAY HAROLD PATSCHKE, of Baltimore, Md.
 VIVIAN LAVERTE PEDRAZA, of Baltimore, Md.
 HARRY FREDERICK PIERCE, of Baltimore, Md.
 ROMAINE LAWTON PRESNELL, of Pasadena, Md.
 WILLIAM OTTO CARL PRINKE, SR., of Lutherville, Md.
 GERTRUDE MARIE RANKIN, of Baltimore, Md.
 ALAN SPAULDING RENFREW, JR., of Timonium, Md.
 CYNTHIA HAYES REPLIER, of Phoenix, Md.
 LILLIAN LILES ROMEL, of Baltimore, Md.
 GEORGE EDWARD ROSENBERGER, of Baltimore, Md.
 HARRY DAVID ROSSEN, of Buffalo, N. Y.
 MARGARET LYNCH ROWE, of Phoenix, Md.
 HANS JOACHIM RURAINSKI, of Baltimore, Md.
 JOHN WILLIAM SCHRUFER, of Baltimore, Md.
 RICHARD HENRY SCHWARMAN, of Baltimore, Md.
 KENNETH EDWIN SHAW, of New York, N. Y.
 DOROTHY CHELQUIST SPECKHALS, of Bladensburg, Md.
 WILLIAM STANLEY STAEWEN, of Baltimore, Md.
 LOIS MACFARLAINE STUDTE, of Houston, Del.
 GENE DAVID SWANNER, of Glen Burnie, Md.
 ELEONORE LUZIA SWIM, of Falls Church, Va.
 WILLIAM GRANT TAIT, of Baltimore, Md.
 SARA VINCENT THOROUGHGOOD, of Millsboro, Del.
 PAUL GERHARD TITTEL, of Baltimore, Md.
 JAMES JOHN TSIGOUNIS, of Baltimore, Md.
 LITA MARIE TZANNES, of West Somerville, Mass.
 RUSSELL CLARKE URICH, JR., of Baltimore, Md.
 JOSEPH JAMES WEDIG, of Newark, Del.

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Graduating with Honors

MORTON ABRAHAMS
 HAROLD NORVELL BRYANT
 RUTH KEELE BROOKS CHAPIN
 JOSEPH LOUIS FELDER
 RAYMON JEROME HACKER
 ELINOR TOMLIN HELMS HANSON

JESSIE PLEDGER HODGES
 MARY LORD HOFFMAN
 LAURENCE ARYAH LEBOVIC
 EVELYNNE FROHMAN MEYERSON
 KARLHEINZ MOCK
 JOSEPH P. NAPORA, JR.

GENE DAVID SWANNER

BACHELORS OF SCIENCE IN NURSING

ADELAIDE POWEY BRUCE, of University Park, N. Mex.
LOUISE BOYER HELD, of North Wales, Pa.
PATRICIA GERIE HUNNICUTT, of Baltimore, Md.
CAROL ANN CAMPION JOHNSON, of New Haven, Conn.
EVELYN RITA KARLSSON, of Honolulu, Hawaii

CAROLYN ELIZABETH LAWRENCE, of Fort Lauderdale, Fla.
LOIS JEAN SCARBOROUGH, of Baltimore, Md.
JANE EVANS PURNELL TAYLOR, of Baltimore, Md.
JEAN LOUISE ALBERT TRIBULSKI, of Severna Park, Md.
MARY RUTH WILLIFORD, of Baltimore, Md.

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BACHELORS OF SCIENCE IN ENGINEERING

RICHARD KENNETH ALBRIGHT, of Linthicum Heights, Md.
MICHAEL ROBERT AMANN, of Baltimore, Md.
RONALD EARL ARMIGER, of Millersville, Md.
CARL NELSON AVERY, Jr., of Baltimore, Md.
PETER BATASKOV, of Baltimore, Md.
CHARLES FRANCIS BEASMAN, of Baltimore, Md.
ROBERT LEROY BECKHARDT, of Towson, Md.
THOMAS JOSEPH BELL, of Baltimore, Md.
CHARLES ALVA BELLAM, of Annapolis, Md.
ROBERT PRESTON BERK, of Baltimore, Md.
BARRETT LAWRENCE BOOTH, of College Park, Md.
VAUGHN FRANCIS BRADLEY, of Baltimore, Md.
GERALD ARMOUR BROWN, of Baltimore, Md.
JOHN HERMAN BRUNS, Jr., of Arnold, Md.
WILLIAM PATRICK BRYANT, of Cheverly, Md.
CLIFFORD CURTIS BURDEAUX, of Baltimore, Md.
EUGENE THOMAS CAMPONESCHI, of Baltimore, Md.
RONALD EDWARD CHASE, of Baltimore, Md.
JACOB ELMER CHEEZUM, of Baltimore, Md.
JAMES BERNARD CHISM, of Laurel, Md.
NEALE GORDON COLDER, of Baltimore, Md.
THOMAS AQUINAS CONSIDINE, of Baltimore, Md.
HERBERT WARREN CORBETT, of Timonium, Md.
JOHN PATRICK CULLEN, of Baltimore, Md.
RICHARD MICHAEL DALEY, Sr., of Bel Air, Md.
RONALD FRANK D'ANNA, of Baltimore, Md.
HUGH CAMPBELL DAVEY, of Glen Burnie, Md.
STANTON ZELIS DUBOW, of Baltimore, Md.
JOHN LEWIS EDLER, of Baltimore, Md.
ANDREW FRANCIS EIKENBERG, of Baldwin, Md.
JOHN WILLIAM ENSOR, of New Windsor, Md.
ALLAN FANG, of Randallstown, Md.
DONALD CHARLES FAUST, of Lutherville, Md.
BERYL LOUIS FRANCIS, of Severn, Md.
FRANK JAMES FRICKE, of Forest Hill, Md.
JOHN ALLEN FUNK, of Rockville, Md.
ROBERT JAMES GAIBERS, of Baltimore, Md.
GEORGE SAMUEL GOODMAN, of Baltimore, Md.
MELVIN FREDERICK GRAHL, of Baltimore, Md.
GORDON CAPRON GROVES, of Owings Mills, Md.
ROBERT LEE HANLEY, of Randallstown, Md.
LAWRENCE JOHN HAYWARD, of Baltimore, Md.
GEORGE JOSEPH HELD, of Baltimore, Md.

FRANK EDWARD HENRY, of Ellicott City, Md.
GEORGE FRANK HESSLER, Jr., of Baltimore, Md.
PHILIP IRVIN HIGHTOWER, of Baltimore, Md.
JOHN RATH HOFFMAN, of Cockeysville, Md.
ROBERT LEE HOWARD, of Baltimore, Md.
BERNARD STANLEY HYATT, Jr., of Linthicum Heights, Md.
MICHAEL JOSEPH HYLE, of Baltimore, Md.
ROBERT LEE JAMISON, of Cockeysville, Md.
JOHN CARROLL JENDREK, of Baltimore, Md.
ANTHONY JULIANO, of Silver Spring, Md.
KENNETH LAYNE KEARNS, of Baltimore, Md.
GEORGE FRANKLIN KNODE, Jr., of Williamsport, Md.
ANDREW WILLIAM KOHLER, of Baltimore, Md.
MILTON MORRIS KROUT, of Baltimore, Md.
PERRY LEON LEWIS, of Baltimore, Md.
JEROME JOSEPH LEYENDECKER, of Glen Burnie, Md.
CHARLES HENRY LINGG, of Reisterstown, Md.
RODNEY WELLS LOCKS, of Baltimore, Md.
JOHN EDWARD LORENZ, of Baltimore, Md.
CHARLES JAMES LUERSSEN, of Winston Salem, N. C.
ALBERT LOUIS LUTZ, of Glen Burnie, Md.
RICHARD WILLIAM MAGNANI, of Baltimore, Md.
SALVATORE JOSEPH MARANTO III, of Baltimore, Md.
JAMES WILLIAM MARTIN, of Annapolis, Md.
MATHEW MATRULLO, of Baltimore, Md.
JAMES EARL MAYES, of Baltimore, Md.
LEO AUSTIN McCAFFERTY, Jr., of Baltimore, Md.
CHARLES RALPH MORRIS, of Millersville, Md.
THOMAS ROGER MORRISON, of Glen Burnie, Md.
NORMAN LOUIS MULGREW, of Baltimore, Md.
RUSSELL MURRAY, of Baltimore, Md.
ANTHONY THOMAS NASUTA, Jr., of Baltimore, Md.
JOHN THOMAS NEAT, of Reisterstown, Md.
JOHN THOMAS NEUKAM, of Baltimore, Md.
GIFFEN BECHTEL NICKOL, of Baltimore, Md.
CHESTER VYTAUTAS NOREIKA, of Baltimore, Md.
HONESTO CALATRAVA OCAMPO, of Baltimore, Md.
GREGORY ALEXANDER OPRESKO, of Beltsville, Md.
STEWART NELSON OVERTON, of Baltimore, Md.
BRUCE ELDRIDGE PACKHAM, of Cockeysville, Md.
DONALD JOHN PALUGH, of Baltimore, Md.
ANDREW JOHN PANUSKA, of Baltimore, Md.
ALAN SCOTT PARRISH, of Baltimore, Md.

VERNON ROLAND PEARL, of Baltimore, Md.
 CHARLES PAUL PIEKARSKI, of Joppa, Md.
 JOSEPH MARION POLLITT, of Baltimore, Md.
 ROBERT EDWARD PRINCE, of Baltimore, Md.
 CHARLES BORROMEO RAFFERTY, JR., of Baltimore, Md.
 DAVID JOHN RAHNIS, of Baltimore, Md.
 RICHARD WOODROW RAINS, of Monkton, Md.
 JOHN ORNULFS RATERMANIS, of Baltimore, Md.
 THOMAS JOSEPH RICKLE, of Owings Mills, Md.
 ROBERT RICHARD RIGGS, of Ferndale, Md.
 LEWIS DELMOTTE RINKER, JR., of Bel Air, Md.
 ERIK ROSENBAUM, of Randallstown, Md.
 GORDON CHARLES SCHEHLEIN, of Baltimore, Md.
 WILLIAM ROBERT SCHILLINGS, of Baltimore, Md.
 WILLIAM SYLVESTER SCHULTZ, JR., of Baltimore, Md.
 JOSEPH MORRIS SELIG, of Baltimore, Md.
 ROBERT LEE SHIPLEY, of Baltimore, Md.
 GARY ALAN SMITH, of Baltimore, Md.
 GEORGE AUDRÉ SMOOT, JR., of Burtonsville, Md.
 THEODORE BAILEY STAGG, JR., of Baltimore, Md.

CLYDE ELLIS TABER III, of Baltimore, Md.
 NORBERT EDWARD TANKERSLEY, of Baltimore, Md.
 LESTER EUGENE TOWNER, of Baltimore, Md.
 FRANCIS GERARD TRAGESER, of Riviera Beach, Md.
 GLENN EDWARD TRUMBLE, of Baltimore, Md.
 SUSAN TERESA UTARA, of Baltimore, Md.
 DAVID ERIC WAELEDE, of Falls Church, Va.
 LEROY HOWARD WARTHEN, of Lansdowne, Md.
 QUINTON PRESTON WEAVER, of Glen Burnie, Md.
 EDWIN JOSEPH WEBER, of Baltimore, Md.
 HAROLD ROLAND WHITE, of Reisterstown, Md.
 THOMAS LEROY WILHELM, of Baltimore, Md.
 CLARENCE WILLIAMS, of Baltimore, Md.
 ROLAND STANLEY WILLIAMS, SR., of Baltimore, Md.
 ELLIS WAYNE WOESSNER, of Baltimore, Md.
 GERALD WAYNE WOLF, of Fort Worth, Texas
 RICHARD EUGENE WOLFE, of Baltimore, Md.
 HAL DEEVER WOOD, of Towson, Md.
 WILLIAM E. YOUNGER, JR., of Baltimore, Md.

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Graduating with Honors

RICHARD KENNETH ALBRIGHT	ALAN FANG	RUSSELL MURRAY	ROBERT LEE SHIPLEY
CARL NELSON AVERY, JR.	GORDON CAPRON GROVES	ALAN SCOTT PARRISH	GARY ALAN SMITH
BARRETT LAWRENCE BOOTH	FRANK EDWARD HENRY.	ROBERT EDWARD PRINCE	GEORGE AUDRÉ SMOOT, JR.
CLIFFORD CURTIS BURDEAUX	GEORGE FRANKLIN KNODE, JR.	ERIK ROSENBAUM	CLYDE ELLIS TABER, III
RONALD EDWARD CHASE	RICHARD WILLIAM MAGNANI	WILLIAM SYLVESTER SCHULTZ, JR.	EDWIN JOSEPH WEBER
RONALD FRANK D'ANNA	THOMAS ROGER MORRISON	JOSEPH MORRIS SELIG	HAROLD ROLAND WHITE

MASTERS OF SCIENCE IN ENGINEERING

in the Evening College with titles of essays

ROBERT ANDREW AMTMANN, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1962. Electrical Engineering. An Investigation of Analog Search Techniques.	WALTER ALOYSIOUS KOVALCHEK, of Baltimore, Md., B. S. E. The Johns Hopkins University, 1961. Electrical Engineering. A Comparison of Threshold Performance of Modern Analog FM Demodulators.
FREDERICK JAMES CONRAD, of Baltimore, Md., B. S. E. The Johns Hopkins University, 1961. Electrical Engineering. A Low-Distortion Wide-Band Voltage Controlled Attenuator.	GEORGE HENRY McAFEE, of Baltimore, Md., A. B. Centre College of Kentucky, 1949. Electrical Engineering. A Survey of Static Analog Vector Adders.
WILLIAM EDWARD FRENCH, JR., of Baltimore, Md., B. S. E. The Johns Hopkins University, 1960. Electrical Engineering. Some Aspects of Phase-Reversal Coded-Pulse Techniques as Applied to Radar Systems.	HAROLD LEMMON THEISS, of Ellicott City, Md., B. E. E. University of Louisville, 1958. Electrical Engineering. Threshold Logic Character Recognition.
PAUL JOHN HEFFERNAN, of Harrington Park, N. J., B. A., B. S. E. E. Catholic University, 1962. Electrical Engineering. Waveform Distortion in a Maximum Likelihood Darrington Detector for M-ary PFM Signals.	ROBERT FRANK WANCOWICZ, of Baltimore, Md., B. S. E. The Johns Hopkins University, 1959. Electrical Engineering. A Method for Predicting the Existence of Self Sustained Limit Cycles in a Multiloop Control System Containing Two Distinct Non Linear Elements.

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JOHN ORLAND WEDEL, JR., of Baltimore, Md., B. S. E. The Johns Hopkins University, 1959. Electrical Engineering. A Multipath Correction Technique for Wideband Communications.

MASTERS OF SCIENCE

in the Evening College

with titles of essays

- FRANCIS THOMAS ANNULIS, of Baltimore, Md., B. S. Loyola College, 1962. Management Science.
- DANIEL D. BENICE, of Rockville, Md., B. A. University of Buffalo, 1963. Numerical Science.
- RALPH WILLIS BIDDLECOMB, of Lutherville, Md., B. S. Hampden-Sydney College, 1952. Management Science.
- HOWARD IRVING BULL, JR., of Ellicott City, Md., B. S. E. The Johns Hopkins University, 1964. Management Science.
- IRVIN HORN CHAMBERLAIN, of Rockville, Md., B. E. S. The Johns Hopkins University, 1962. Management Science.
- GEORGE CLAUDE GINGHER, JR., of Baltimore, Md., B. S. E. The Johns Hopkins University, 1963. Management Science.
- JOHN TORSCH GORSUCH, JR., of Baltimore, Md. B. E. The Johns Hopkins University, 1951. Management Science.
- JOHN JEROME HELLMAN, of Timonium, Md., B. E. S. The Johns Hopkins University, 1958. Management Science.
- MATTHEW IGNATIUS HUTTON, of Baltimore, Md., B. S. Loyola College, 1960. Management Science.
- WAHE WAGRAM KARAYAN, of Riverdale, Md., B. S. University of Rochester, 1957. Physics.
Optical Design Techniques on Dall Kirkham Telescope for Ultra-Violet Radiation Field.
- ROBERT JAMES KELLY, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1959. Physics.
Stimulated Raman Effect.
- PAUL RICHARD KRETCHMAR, of Baltimore, Md., B. S. E. E. Newark College of Engineering, 1957; M. E. E. The Catholic University of America, 1961. Management Science.
- HARRISON RAY LAMBERT, of Catonsville, Md., B. E. The Johns Hopkins University, 1944; M. S. University of Pittsburgh, 1953. Physics.
Design of Student Apparatus for Nuclear Magnetic Resonance Experiments.
- DONALD DRYSDALE WILLIAMS, of Timonium, Md., B. E. McGill University, 1941; M. S. E. The Johns Hopkins University, 1948; B. S., 1959. Management Science.
- ROBERT STUART LITTLEPAGE, of Baltimore, Md., B. S. Loyola College, 1962. Physics.
A Study of the Equivalent Width of Two Overlapping Absorption Lines Including a Discussion of Certain Limiting Values.
- CHRISTOPHER MAKRES, of Baltimore, Md., B. S. E. E. Drexel Institute of Technology, 1955. Management Science.
- GEORGE MCGEE, JR., of Baltimore, Md., B. S. University of Delaware, 1951. Management Science.
- JOHN LEE MEREDITH, JR., of Bel Air, Md., B. S. Ch. E. Texas A. & M. University, 1953. Physics.
A Numerical Method for Unfolding X-Ray Spectra.
- RODNEY DANIEL NEAL, of York, Pa., B. S. M. E. Duke University, 1958. Management Science.
- ROBERT DAVID NUTTER, of Rockville, Md., B. S. in Aero. Eng. Massachusetts Institute of Technology, 1948; M. S. in Aero. Eng., 1949. Management Science.
- EDWARD WILLIAM ROLLMAN, of Cockeysville, Md., M. E. University of Cincinnati, 1962. Management Science.
- GEORGE ALBERT SCHIROETER, of Fallston, Md., B. S. Loyola College, 1962. Management Science.
- JACK LESTER SHAGENA, of Bel Air, Md., B. S. Virginia Polytechnic Institute, 1959. Management Science.
- STERLING IRWIN SOLOMON, of Dayton, Md., B. A. The American University, 1962. Management Science.
- E. GERSON STUTMAN, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1958. Physics.
The Theory and Design of an Instrument to Measure the Optical Transfer Function.
- ROBERT GRINSTEAD VAUGHAN III, of Indianapolis, Ind., B. E. S. The Johns Hopkins University, 1959. Management Science.
- DONALD THOMAS WARD, of Catonsville, Md., B. S. University of Maryland, 1962. Management Science.

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MASTERS OF EDUCATION

- JOYCE ELIZABETH ANDERSON, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1961.
- MARLENE KAY BARRELL, of Lutherville, Md., B. S. State Teachers College, Towson, Md., 1956.
- GLORIA MADELINE CAMPBELL, of Baltimore, Md., B. S. Elem. Ed. Coppin State Teachers College, 1955.
- JEAN KANZLER CATON, of Baltimore, Md., B. S. in Ed. State Teachers College, Towson, Md., 1954.

- SHIRLEY ANNE CAUSEY, of Baltimore, Md., B. S. University of Maryland, 1963.
- LENOX ARTHUR COLES, of Baltimore, Md., B. S. Saint Paul's College, Virginia, 1959.
- DAVETTE ANITA CONNER, of Baltimore, Md., B. S. Morgan State College, 1964.
- ELAINE BETH COOPER, of Baltimore, Md., B. S. University of Maryland, 1962.
- SHEILA CAROL COOPER, of Baltimore, Md., B. S. Boston University, 1962.
- VIRGINIA WOODLAND CRUSE, of North East, Md., B. S. Loyola College, 1961.
- DAVID LYNN DRAKULA, of Joppatowne, Md., B. S. Ed. California State College, 1964.
- ELEANOR DARNALL TWOHY DUGAN, of Baltimore, Md., B. S. The Johns Hopkins University, 1960.
- MARY BRUCE EARLE, of Lutherville, Md., B. S. Ed. Kent State University, 1959.
- RICHARD ARNOLD FOX, of Lutherville, Md., B. S. in B. A. Boston University, 1941.
- SHELDON DAVID GLASS, of Baltimore, Md., B. A. Hamilton College, 1954; M. D. University of Virginia, 1959.
- JOSEPH WALTER HALUCH, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1961.
- LOIS KEMP HART, of Baltimore, Md., B. S. The Johns Hopkins University, 1962.
- DONALD KENNETH HUGHES, of Brooklandville, Md., B. S. State Teachers College, Towson, Md., 1957.
- WILLIAM GEORGE HUPPERT, of Perry Hall, Md., B. S. University of Maryland, 1951.
- SHIRLEY SIMPSON JERAULD, of Atlanta, Ga., A. B. Oberlin College, 1942.
- VIRGINIA ANNE DARGIS JORDAN, of Bel Air, Md., B. S. in Sec. Sci., College Misericordia, 1955.
- PATRICIA JANE KANNER, of Baltimore, Md., B. A. University of Maryland, 1960.
- BARBARA MYERS KANTOROW, of Rockville, Md., B. S. State Teachers College, Towson, Md., 1958.
- ROBERT FRANCIS KENDALL, of Ellicott City, Md., B. S. University of Maryland, 1952; S. T. B. Wesley Seminary, 1956.
- PEGGY RUTH KENNEDY, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1949.
- PAUL JOSEPH KESMODEL, of Severna Park, Md., B. A. St. John's College, 1936.
- WILLIAM EUGENE KLARNER, of Baltimore, Md., B. S. Loyola College, 1951.
- BETTE ANN KRAMER, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1960.
- HOWARD GEORGE LENNON, of Westminster, Md., B. S. The Johns Hopkins University, 1963.
- MARY BUCHANAN RENSHAW LEONARD, of Baltimore, Md., A. B. Denison University, 1934.
- JAMES LEE MARSHALL, JR., of Atlantic City, N. J., B. S. Hampton Institute, 1953.
- CHARLES NORMAN MILLER, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1965.
- RICHARD JOHN MONTGOMERY, of Reisterstown, Md., B. S. West Chester State College, 1957.
- EARL ALTON MYERS, JR., of Edgewood, Md., B. S. State Teachers College, Towson, Md., 1959.
- ROBERT HENRY PAULI, of Annapolis, Md., B. S. United States Naval Academy, 1940.
- JANET ELLEN POWELL, of Baltimore, Md., B. S. Coppin State Teachers College, 1958.
- PEARL M. BROCK RISSER, of Baltimore, Md., B. S. Elizabethtown College, 1940.
- MAUDE LUCILLE BARCLAY ROHLSSEN, of Baltimore, Md., B. S. The Johns Hopkins University, 1948.
- RODELLA ROBBINS SCHACHER, of Baltimore, Md., B. S. University of Maryland, 1964.
- MILTON JULIAN SCHUL, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1960.
- JOSEPH ROBERT SERENA, of Baltimore, Md., A. B. Randolph Macon College, 1936.
- LINDA SOULÉ, of Baltimore, Md., B. S. University of Maryland, 1964.
- CURTIS EZRA STERMER, of Glen Rock, Pa., B. A. Washington and Jefferson College, 1940.
- MAXINE BROWN STREAT, of Baltimore, Md., B. A. Washington College, 1949.
- LAWRENCE J. M. SWEIGERT, of Philadelphia, Pa., B. A. La Salle College, 1963.
- MARY BLESSING TOLD, of Baltimore, Md., A. B. Bucknell University, 1955.
- DONALD WAYNE URBANCIC, of Owings Mills, Md., B. A. The Johns Hopkins University, 1960.
- RONALD STANLEY WEBB, of Bel Air, Md., B. S. in Mus. Ed. Gettysburg College, 1958.
- GLORIA MICHAELS WEINSTEIN, of Baltimore, Md., B. A. New York University, 1945.
- LETITIA DRYDEN WEISE, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1957.
- GERALDINE COLSON YOUNG, of Woodstock, Md., B. S. State Teachers College, Towson, Md., 1959.

MASTERS OF LIBERAL ARTS

- LOLA JONES AMIS, of Baltimore, Md., B.S. Hampton Institute, 1947.
- DAVID ARTHUR AMOS, JR., of Baltimore, Md., B.S. The Johns Hopkins University, 1954.
- LOIS ATWELL ANKEWITZ, of Baltimore, Md., B.S. The Johns Hopkins University, 1959.
- JOYCE BROWN ARCHER, of Baltimore, Md., B.S. State Teachers College, Towson, Md., 1959.
- WILLIAM CURTIS BALL, of North East, Md., B.A. Hiram College, 1948.
- RAYMOND CHARLES BARBER, of Baltimore, Md., B.S. St. Peter's College, 1959.
- CLAUDE LAVERE BARTLES, of Baltimore, Md., B.S. University of Maryland, 1962.
- ERIC A. BAUM, of Cleveland Heights, Ohio, B.A. Western Reserve University, 1958; M.D. The University of Michigan, 1962.
- ROBERT WILLIAM BEERY, of Baltimore, Md., B.E. The Johns Hopkins University, 1943.
- ELIZABETH EHLERS BEHRINGER, of Baltimore, Md., B.S. State Teachers College, Towson, Md., 1960.
- DOROTHY MAE BENSEL, of Baltimore, Md., B.S. The Johns Hopkins University, 1961.
- GALE I. LISZEWSKI BIENIEK, of Baltimore, Md., B.S. State Teachers College, Towson, Md., 1962.
- MARTIN LENZI BOSSE, of Baltimore, Md., B.S.E.E. The Johns Hopkins University, 1951.
- MARJORIE FAW BOWERMAN, of Phoenix, Md., B.S. in Ed. State Teachers College, Towson, Md., 1954.
- EMMA NEASE BOWLAND, of Lutherville, Md., B.S. in L.S. Western Reserve University, 1942.
- NEWTON ELLSWORTH BUNCE, of Baltimore, Md., A.B. Western Maryland College, 1951; S.T.B. Wesley Theological Seminary, 1954.
- WILLIAM PAUL CALOCCI, of Bel Air, Md., B.A. Assumption College, 1956.
- ALLEN MARVIN CARTON, of Baltimore, Md., B.E. The Johns Hopkins University, 1948.
- DOUGLAS EMERSON CLARK, of Kingsville, Md., B.E.S. The Johns Hopkins University, 1962.
- MARGARET LARENE COOLEY, of Abingdon, Md., B.S. Maryland State Normal School, Towson, Md., 1936.
- BARBARA BEACHAM CUSHING, of Baltimore, Md., A.B. Goucher College, 1951.
- WALTER ANTHONY EDEN, of Baltimore, Md., B.S. State Teachers College, Towson, Md., 1960.
- HENRY HARVEY EIDMAN, of Timonium, Md., B.S. The Johns Hopkins University, 1958.
- JOE ENG, of Springfield, Ohio, B.Sc. Ohio State University, 1954.
- MARY ALICE ENGEL, of Baltimore, Md., A.B. Western Maryland College, 1932.
- SEYMOUR LEO ESSROG, of Randallstown, Md., B.A. Yeshiva University, 1955; M.H.L., 1959.
- LOUISE FRANKLIN EWALD, of Baltimore, Md., B.S. State Teachers College, Frostburg, Md., 1957.
- LENORE FINE, of Baltimore, Md., A.B. Goucher College, 1944.
- HILDA COHEN FISHER, of Owings Mills, Md., A.B. Goucher College, 1947.
- VIRGINIA KAROW FOWBLE, of Baltimore, Md., B.A. Western Maryland College, 1939.
- JOAN MARY FREDERICKSON, of Baltimore, Md., B.S. The College of St. Catherine, 1948.
- EUGENIA MATELIS GIARDINA, of Baltimore, Md., B.S. The Johns Hopkins University, 1949.
- DOROTHY WARANCH GLASNER, of Baltimore, Md., A.B. Goucher College, 1932.
- ARTHUR MILTON GOMPF, of Baltimore, Md., B.E. The Johns Hopkins University, 1934.
- MAE INEZ GRAHAM, of Baltimore, Md., A.B. The Woman's College of the University of North Carolina, 1925.
- HARRIET KRAKOW GREIF, of Baltimore, Md., B.A. University of Maryland, 1948.
- ARTHUR EDWIN GUTMAN, of Baltimore, Md., A.B. The Johns Hopkins University, 1935.
- ROBERT JOSEPH HARFORD, of Baltimore, Md., B.A. The Johns Hopkins University, 1964.
- LULU MARKARID HAROUTUNIAN, of Baltimore, Md., M.D. American University of Beirut, 1944.
- CHARLES LEONARD HAYES, JR., of Baltimore, Md., B.S. State Teachers College, Towson, Md., 1954.
- ALLEN EDWARD HOLMES, of Baltimore, Md., A.B. University of Denver, 1951.
- ARCH ELLIOTT HOUSTLE, JR., of Baltimore, Md., B.A. Cornell University, 1932; M.E. 1934.
- ANITA LESHNER HUNTER, of Baltimore, Md., A.B. Hood College, 1959.
- SHEILA WEINSTEIN HUTMAN, of Baltimore, Md., S.B. Simmons College, 1958.
- MENA GWENLLIAN ISITT, of Baltimore, Md., B.A. Loyola University, 1952; M.Ed. Loyola College, 1962.

- ELAINE ISAACSON KATZEN, of Baltimore, Md., A. B. Goucher College, 1952.
- FRANCIS THOMAS KEENAN, of Dayton, Ohio, B. A. University of Dayton, 1954.
- ELLEN WOLFSON KLINE, of Baltimore, Md., B. S. University of Maryland, 1962.
- PHYLLIS LOU KNIGHT, of Silver Spring, Md., B. S. in Ed. University of Vermont, 1953.
- BARBARA SHOFER KOEPEL, of Baltimore, Md., B. S. Boston University, 1959.
- BETH JOANNE KOPELKE, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1951.
- RICHARD THOMAS KORITZER, of Baltimore, Md., D. D. S. University of Maryland, 1962.
- ROBERT LEE LAWRENCE, of Timonium, Md., B. M. E. North Carolina State College, 1957.
- BARBARA LEVIN, of Baltimore, Md., B. S. University of Maryland, 1964.
- ARLENE GOLDFUS LUTZ, of Baltimore, Md., B. A. University of Delaware, 1964.
- MARIE HUBER MARSHALL, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1960.
- WILLIAM BENJAMIN MAY, of Kingsland, Ark., A. B. Syracuse University, 1959.
- FRANK LYNN MAYER, of Sykesville, Md., A. B. Western Maryland College, 1958; M. Ed. The Johns Hopkins University, 1963.
- THOMAS CHARLES MCCLOUD, of Bowie, Md., A. B. Berea College, 1954.
- THOMAS LARRY MCFARLAND, of Baltimore, Md., B. A. Westminster College, 1958.
- JOHN ANDREW MICKLOS, of Baltimore, Md., B. A. University of Maryland, 1963.
- ALVA HEUP MORKOVIN, of Baltimore, Md., B. A. University of Wisconsin, 1941.
- ANTHONY CHARLES MORREALE, of Baltimore, Md., A. B. King's College, 1962.
- THOMAS PAUL MURTHA, of Baltimore, Md., A. B. University of Pittsburgh, 1950.
- HAZEL BLACKWELL NELSON, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1963.
- THOMAS GREGORY NEMCIK, of Baltimore, Md., B. A. Rutgers University, 1965.
- BOB TRUETT NOBLES, of Glen Burnie, Md., B. S. University of Maryland, 1965.
- EDWARD WILLIAM O'CONNELL, of Jersey City, N. J., B. S. St. Peter's College, 1965.
- HELEN WILLIAMS OHRENSCHALL, of Baltimore, Md., B. S. The Johns Hopkins University, 1947.
- CATHERINE FAITH OPPENHEIM, of Baltimore, Md., A. B. Hunter College of The City of New York, 1939.
- RUTH CORNELIUS ORNDORFF, of Shepherdstown, W. Va., A. B. Shepherd College, 1958.
- ADINA ROSENFELD PARITZKY, of Baltimore, Md., B. A. Carnegie Institute of Technology, 1964.
- JAMES DONALD QUICKEL, of York, Pa., B. S. University of Pennsylvania, 1951.
- RUTH KEMPER QUICKEL, of York, Pa., A. B. Wilson College, 1937.
- MARGOLA RIVKIN, of Baltimore, Md., A. B. Goucher College, 1957.
- BABETTE HECHT ROSENBERG, of Baltimore, Md., A. B. Smith College, 1945.
- GILBERT SANDLER, of Baltimore, Md., A. B. University of Pennsylvania, 1949.
- ROBERT LEE SCHAUFLE, of Baltimore, Md., B. S. University of Maryland, 1958.
- BARBARA KNAFEL SCHERLIS, of Baltimore, Md., A. B. Mount Holyoke College, 1946.
- CHARLOTTE FREEMAN SCHLOSS, of Baltimore, Md., B. S. The Johns Hopkins University, 1934.
- ETHEL GUNDERSDORF SCHMITT, of Baltimore, Md., A. B. State Teachers College, Towson, Md., 1963.
- ROBERT EDWIN SENEY, of Baltimore, Md., A. B. Wake Forest College, 1949.
- JAMES VINCENT SIMONETTE, of Randallstown, Md., A. B. Marshall College, 1954.
- RICHARD HOMER STABLEFORD, of Lapeer, Mich., A. B. University of Michigan, 1956.
- RAYMOND ALFRED STEVENS, of Millers, Md., B. A. University of Maryland, 1958.
- ROBERT MASON STRICKLAND, of Baltimore, Md., B. S. Florida Southern College, 1959.
- NETTIE BARCROFT TAYLOR, of Baltimore, Md., A. B. Florida State University, 1936; S. B. in L. S. University of North Carolina, 1942.
- NANCY ANNE THOMAS, of Randallstown, Md., B. S. State Teachers College, Towson, Md., 1961.
- WILLIAM EPHRAIM TICKNOR, of Baltimore, Md., A. B. The University of Georgia, 1930; S. B. in L. S. University of North Carolina, 1947.
- SHIRLEY LOWE TURNER, of Baltimore, Md., B. A. University of Maryland, 1964.
- EDWARD OTTO UHRIG, of Baltimore, Md., B. S. The Johns Hopkins University, 1963.

RUTH ELIZABETH VAN SICKLE, of Baltimore, Md., A. B. Greenville College, 1937.

ELIZABETH JANE WALL, of Fairbanks, Alaska, B. A. College Misericordia, 1956.

EDWIN TRUITT WATSON, of Baltimore, Md., Ph. B. Loyola College, 1952.

LLOYD BEHLEN WEBB, of Baldwin, Md., B. S. The Johns Hopkins University, 1960.

HENRIETTA WEXLER, of Baltimore, Md., B. A. Brooklyn College, 1963.

BARBARA SPEDDEN WILSON, of Baltimore, Md., B. S. State Teachers College, Salisbury, Md., 1963.

EVA LOUISA JONES WORTHINGTON, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1958.

JOHN EDWARD YINGLING, JR., of Murray Hill, N. J., B. A. Yale University, 1955.

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CERTIFICATES OF ADVANCED STUDY IN EDUCATION

THERESA C. DUTCH, of Baltimore, Md., B. A. Talladega College, 1951; M. S. in L. S. Catholic University, 1960.

EPHRAIM PHINEAS GOODMAN, of Baltimore, Md., M. A. University of Iowa, 1958.

THEODORE DAVID JUMP, of Westminster, Md., B. A. Yale University, 1956; M. Ed. The Johns Hopkins University, 1962.

DOROTHY WOIHRNA MARTIN, of Baltimore, Md., B. S. The Johns Hopkins University, 1961; M. Ed. 1964.

WILLIAM EARL QUAY, of Baltimore, Md., B. S. in Ed. Wayne State University, 1946; M. Ed., 1952.

SIEGFRIED WOLFF, of Baltimore, Md., B. S. University Erlangen, 1957; M. A. The Johns Hopkins University, 1961; M. P. H. 1964.

(6)

MASTERS OF SCIENCE

in the School of Hygiene and Public Health

with titles of theses

EDITH ELIZABETH ARMSTEAD, of Baltimore, Md., B. S. Morgan State College, Maryland, 1963. Biochemistry. Vitamin B₁₂ and Cholesterol Biosynthesis.

JANICE MARIE CARMODY, of North Bergen, N. J., B. S. College of Mount Saint Vincent, 1964. Biochemistry. Thymine and Thymidine Uptake by *H. influenzae*.

BARBARA LEE HOLDEN, of Baltimore, Md., B. S. University of Miami, 1961. Pathobiology. Histochemical Study of Glycogen in *Schistosoma mansoni*.

JEANNE ELAINE SMITH, of Burnham, Pa., B. S. Nurs. University of Pennsylvania, 1959; M. P. H. The Johns Hopkins University, 1966. Mental Hygiene.

Characteristics of Nursing Students in the Associate Degree, Diploma, and Baccalaureate Programs in the Middle Atlantic Region: An Exploratory Study.

(4)

DOCTORS OF SCIENCE

in the School of Hygiene and Public Health

with titles of theses

MARSHALL DINOWITZ, of Baltimore, Md., B. S. University of Maryland, 1960; Sc. M. The Johns Hopkins University, 1964. Pathobiology. Survival of Rous Sarcoma Virus and Induced Tumor Recurrence in Resistant Chickens.

EMMANUEL UKWU ENI, of Yaba, Lagos, Nigeria, B. S. Howard University, 1961; M. S., 1963. Pathobiology. The Dietary Effects of Acorn on Growth and Developmental Morphology of *Hymenolepis diminuta* in the Rat.

MILDRED E. FRANCIS, of Ottawa, Ont., Canada, B. S. District of Columbia Teachers College, 1959; Sc. M. The Johns Hopkins University, 1965. Biostatistics. A Stochastic Model for the Estimation of Platelet Survival *IN VIVO*.

UTUKURU V. GOPALA RAO, of Baltimore, Md., B. Sc. Utkal University, India; M. Sc., 1954. Radiological Science. Influence of Focus and Off-focus Radiation on Radiographic Detail (Modulation Transfer Function) and Patient Exposure in Diagnostic Radiology.

- KURT GORWITZ, of Baltimore, Md., B. B. A. The City College of New York, 1950; M. S. Columbia University, 1955; M. P. A. Syracuse University, 1955. Mental Hygiene.
A Critique of Past and Present Mental Health Statistics in the United States and a Blueprint for Future Program Development.
- LOUIS PHILIP HELLMAN, of Washington, D. C., B. S. The City College of New York, 1933; A. M. Boston University, 1935. Public Health Administration.
A Value Measure for Selecting Proposals for Research Grant Support.
- JAMES C. HITCHCOCK, JR., of Salinas, Calif., A. B. Fresno State College, California, 1960. Pathobiology.
The Age Composition of a Natural Population of *Anopheles quadrimaculatus* Say at the Patuxent Wildlife Research Center, Maryland.
- CHI-JEN LEE, of Yi-Lan, Taiwan, Republic of China, B. S. in Pharmacy National Taiwan University, 1957. Biochemistry.
Maternal Dietary Restriction on Development and Metabolism of Offspring.
- CARL JACK MITCHELL, of Sallisaw, Okla., B. S. in Ed. Northeastern State College, Oklahoma, 1959; M. S. University of Hawaii, 1963. Pathobiology.
Ecological Studies on the Ectoparasites of Small Mammals, Particularly *Bandicota bengalensis*, in Calcutta, India.
- LEONARD WILLIAM SCHEIBEL, of Lombard, Ill., B. S. in Chem. The Creighton University, 1960; M. S. in Chemistry, 1962. Pathobiology.
Carbohydrate and Energy Metabolism of *Hymenolepis diminuta*.
- W. L. N. TICKELL, of Worthing, Sussex, England, B. Sc. University College of North Wales, 1954; M. Sc., 1959. Pathobiology.
The Ecology and Breeding Biology of the Wandering Albatross *Diomedea exulans* Linnaeus.

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MASTERS OF PUBLIC HEALTH

- FADHIL K. ABOUSY, of Baltimore, Md., M. B., Ch. B. Baghdad University, 1955.
- SHAMSA RIAZ AHMAD, of Dacca, East Pakistan, M. B. B. S. University of Dacca, 1952.
- RAY WARREN ALCOX, of Derwood, Md., D. D. S. University of Minnesota, 1947.
- GEORGE MICHAEL ANTAL, of Baltimore, Md., M. D. Julius Maximilian University at Wurzburg, Germany, 1952; D. T. M. & H. University of London, 1955.
- LADDAWAN BANHARNSUPAWAT, of Bangkok, Thailand, M. D. University of Medical Sciences, Thailand, 1954.
- FRANK WELDON BERRY, JR., of Rock Hill, S. C., A. B. Lincoln University, 1959; M. D. Meharry Medical College, 1963.
- GEORGE THOMAS BLANCH, JR., of Logan, Utah, B. S. Utah State University, 1962; M. D. University of Utah, 1965.
- ROBERT JAY BLENDON, of Philadelphia, Pa., B. A. Marietta College, 1964; M. B. A. The University of Chicago, 1966.
- RIDA WAHBA BOULOS, of Cairo, Egypt, United Arab Republic, M. B., B. Ch. Cairo University, 1964.
- SAMUEL HENRY BREW-GRAVES, of Accra, Ghana, M. B., B. S. St. Thomas's Hospital Medical School, England, 1961.
- JAMES EDWARD CASSIDY, of Lanham, Md., D. M. D. Tufts University, 1948; B. A. Incarnate Word College, 1960.
- BARNETT LOUIS CLINE, of San Antonio, Texas, A. B. Columbia University, 1958; M. D. Baylor University, 1962.
- RICHARD LOBDELL COPPEDGE, of Southern Pines, N. C., B. S. Davidson College, 1942; M. D. University of Pennsylvania, 1945.
- THOMAS J. CRAIG, of Richmond Hill, N. Y., A. B. College of the Holy Cross, 1959; M. D. State University of New York, 1963.
- NANCY ROSS DEAN, of East Greenwich, R. I., B. S. in Nurs. Cornell University, 1963.
- ISABELLE D. DEBELLA, of Washington, D. C., B. S. N. E. The Catholic University of America, 1947; M. S. Georgetown University, 1954.
- JOHN BURLING DE HOFF, of Baltimore, Md., A. B. The Johns Hopkins University, 1935; M. D., 1939.
- VIVIAN MAE DEMAREST, of Point Pleasant, N. J., B. S. Columbia University, 1957.
- GERALD DIAMANT, of Middleburg, Va., B. S. Cornell University, 1935; LL. B. Fordham University, 1940; D. V. M. Michigan State College, 1950.
- R. EDWARD DODGE, JR., of Baltimore, Md., A. B. Taylor University, 1958; M. D. Indiana University, 1962.
- BARBARA ANNE FALCO, of Baltimore, Md., B. S. in Nurs. University of Maryland, 1960.
- EUGENE SHEDDEN FARLEY, JR., of Rochester, N. Y., B. A. Swarthmore College, 1950; M. D. The University of Rochester, 1954.
- NUSRAT FATIMA, of Baltimore, Md., M. B., B. S. University of the Panjab, Pakistan, 1965.
- JAMES ARTHUR FERGUSON, of Rochelle, Ga., D. V. M. Tuskegee Institute, 1960.
- JUDSON F. FORCE, JR., of Penns Grove, N. J., B. S. Wake Forest College, 1959; M. D., 1963.

- WILLIAM NICHOLAS FORTESCUE, JR., of Hendersonville, N. C., A. B. Duke University, 1958; M. D., 1962.
- PRAYMOL GEORGE, of Baltimore, Md., B. Sc. University of Kerala, India, 1960; M. B. B. S., 1967.
- JOSEPH NORMAN GITLIN, of Silver Spring, Md., B. A. University of Pennsylvania, 1951.
- PAUL CHARLES GREGG, of Baltimore, Md., B. S. Union College, 1947; M. D. The Johns Hopkins University, 1951.
- RICHARD JOHN HAVLIK, of Riverside, Ill., B. A. DePauw University, 1960; M. D. Northwestern University, 1964.
- DONALD W. HELBIG, of Lahore, Pakistan, A. B. Cornell University, 1956; M. D. The University of Rochester, 1961.
- BOLIVAR JULIO HERDOIZA, of Bowie, Md., M. D. Central University of Ecuador, 1961.
- FRANK MELVILLE HOOT, of Baltimore, Md., B. S. C. E. Indiana Technical College, 1950; M. S. E. The Johns Hopkins University, 1966.
- PHILIP RAYMOND HUGILL, of Bethesda, Md., Bachelor of Pharm. and B. S. in Pharm. The State College of Washington, 1957; M. S. The University of Michigan, 1963.
- BROOKE GREANEY JAMIESON, of Honolulu, Hawaii, B. A. The University of Hawaii, 1938; M. D. Medical College of Virginia, 1943; M. A. The University of Hawaii, 1964.
- ROBERT TRAVIS JENSEN, of Ashton, Md., B. A. Denison University, 1946; B. S. University of Minnesota, 1946; M. B., 1948; M. D., 1949.
- MARVIN CHARLES JONES, of Baltimore, Md., B. A. The Johns Hopkins University, 1961; M. A. Wayne State University, Michigan, 1963.
- ROBERT WEST JONES III, of Damascus, Md., B. S. in P. H. E. Georgia School of Technology, 1941.
- GEORGE ERWIN KANDEL, of Savannah, Ga., B. S. The University of Georgia, 1955; M. D. Medical College of Georgia, 1958.
- KIM YUN CHAE, of Taegu, Korea, M. D. Kyungpook National University, Korea, 1956.
- JAMES C. KING, of Bethesda, Md., M. B., B. S. University of Durham, England, 1952.
- CHING HSIAO LEE, of Taichung, Taiwan, Republic of China, B. M. National Taiwan University, 1956.
- JOHN LESINSKI, of Baltimore, Md., M. D. Jagellonian University, Poland, 1946.
- PAUL HOWARD LILLY, JR., of Windsor, Va., M. D. Medical College of Virginia, 1964.
- JOANNA CRANSTON MAIDEN, of Meadowview, Va., B. A. University of Richmond, 1950; M. D. Woman's Medical College of Pennsylvania, 1955.
- OLIVE TERESA MANNING, of Lytham, Lancs., England, Dipl. University of London, 1948; D. P. H. N. McGill University, 1958; B. N., 1962.
- FOSTER COLLINS McCALEB, JR., of Pelican, La., B. S. The Tulane University of Louisiana, 1947; M. D., 1951.
- JAMES WILLIAM MILLER, of Silver Spring, Md., D. D. S. Marquette University, 1955; M. S. University of California, San Francisco, 1960.
- JOHN HILL MITCHELL, of Laurel, Md., B. A. Ohio Wesleyan University, 1961; M. D. The George Washington University, 1965.
- JANET ELAINE MULES, of Baltimore, Md., A. B. Bryn Mawr College, 1956; M. D. University of Maryland, 1963.
- JOSE MARIA PAGANINI, of Buenos Aires, Argentina, M. D. National University of La Plata, Argentina, 1961; D. P. H. University of Buenos Aires, 1963.
- ROBERT LYNN PARKER, of Baltimore, Md., B. A. Manchester College, 1957; M. D. Northwestern University, 1961.
- BURTON ROBERT POLLACK, of Baltimore, Md., D. D. S. University of Maryland, 1946.
- THERESA WILHELMINA GREENE REED, of Saint Louis, Mo., B. S. Virginia State College, 1945; M. D. Meharry Medical College, 1949.
- ROBERT E. REICHIARD, of Baltimore, Md., B. S. (Veterinary Medicine) University of Illinois, 1958; D. V. M. University of Illinois, 1960.
- ROBERT EDGAR REYNOLDS, of Baltimore, Md., B. A. Yale University, 1960; M. D. Harvard University, 1964.
- ABRAHAM RISK, of Towson, Md., M. D., C. M. Dalhousie University, 1957.
- BARBARA BARKER ROSE, of Wilmington, Del., B. Sc. McGill University, 1937; M. D., C. M., 1943.
- HEINO RUBIN, of Buffalo, N. Y., M. D. Friedrich Alexander University of Erlangen, Germany, 1963.
- DAVID STANTON RUSSELL, of Baltimore, Md., B. S. Oklahoma State University of Agriculture and Applied Sciences, 1965; M. D. University of Oklahoma, 1963.
- PIERRE J. SEVERYNS, of Baltimore, Md., M. D. State University at Lieges, Belgium, 1960.
- JERRY JOSEPH SHULMAN, of Philadelphia, Pa., B. S. Northwestern University, 1951; M. D., 1955.
- RICHARD I. P. SNIADACH, of Baltimore, Md., B. S. Loyola College, 1960.
- SUSAN SPANGLER, of Baltimore, Md., B. S. in Nurs. University of Virginia, 1963.
- RICHARD PERRY STADTER, of Baltimore, Md., A. B. Princeton University, 1954; M. D. Cornell University, 1962.
- RAYMOND L. STANDARD, of Washington, D. C., B. S. (Chem.) Howard University, 1948; M. D., 1952.
- GEORGE ERNEST THOMAS STEBBING, of Washington, D. C., B. S. University of Maryland, 1957; M. D. Georgetown University, 1961.

DAVID STEINMAN, of Lexington, Ky., B.A. Texas Technological College, 1959; M.D. Baylor University, 1963.

RUTH WALDMAN CAMACHO, of Bethesda, Md., B.A. The City College of New York, 1952; M.D. University of Lausanne, 1957.

KENNETH SIDNEY WELSH, of Wakefield, Mass., S.B. Massachusetts Institute of Technology, 1958; M.D. Western Reserve University, 1963.

DONALD KIBLINGER WALLACE, of Medway, Ohio, B.S. Antioch College, 1960; M.D. Western Reserve University, 1965.

HARVEY WEBB, JR., of Washington, D.C., B.S. (Chem.) Howard University, 1956; D.D.S., 1960; M.S., 1962.

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DOCTORS OF PUBLIC HEALTH

with titles of theses

CHUNDAMANNIL ALEXANDER ALEXANDER, of Baltimore, Md., M.B., B.S. University of Madras, 1958; M.P.H. The Johns Hopkins University, 1964. Public Health Administration.

Medical Care for the Indigent in Baltimore City: The Effects of Change in Method of Paying Physicians.

CONSTANTINO CHUAQUI JAHIAAT, of Santiago, Chile, M.D. University of Chile, 1952; M.P.H. The Johns Hopkins University, 1965. Mental Hygiene.

Marital Adjustment and Respiratory Infections in Children.

ADNAN H. EL-DADAH, of Baltimore, Md., M.B., Ch. B. University of Baghdad, 1955; M.P.H. The Johns Hopkins University, 1965. Epidemiology.

Pathogenesis of West Nile Virus Encephalitis in Mice and Rats.

THOMAS LIVINGSTON HALL, of Baltimore, Md., A.B. Harvard University, 1953; M.D., 1957; M.P.H., 1961. Public Health Administration (International Health).

Health Manpower Planning: The Peru Case Study.

JOUNG SOON KIM, of Seoul, Korea, M.D. Seoul National University, 1960; M.P.H. The Johns Hopkins University, 1963. Pathobiology.

The Epidemiology and Mass Chemotherapy of Paragonimiasis on Che Ju Island.

CLARA DUNCAN KIMBRO, of Adelphi, Md., B.S. in Nurs. University of Maryland, 1963; M.P.H. The Johns Hopkins University, 1964. Mental Hygiene.

An Investigation of the Initial Relationship between Public Health Nurses and Schizophrenic Patients and their Families.

*SAMIR NAGUIB, of Detroit, Mich., M.B., Ch. B. Alexandria University, Egypt, 1957; D.P.H. The High Institute of Public Health, Egypt, 1961. Epidemiology.

Acceptance and Results of a Cervical Cytology Screening Program in Washington County, Maryland.

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* Died May 1967

DOCTORS OF PHILOSOPHY

in The School of Hygiene and Public Health

with titles of dissertations

WAI MUN HUANG, of Kowloon, Hong Kong, Dipl. Sc. Chung Chi College, Hong Kong, 1961; M.A. Kansas State College of Pittsburg, 1962. Radiological Science.

Physiochemical Basis of the Recognition Process in Nucleic Acid Interactions.

MORLEY KAMLER LEYTON, of Seattle, Wash., B.S. The City College of New York, 1952; M.S. Columbia University, 1962. Biostatistics.

Stochastic Models of Life Cycles of Helminthic Parasites.

(2)

MASTERS OF ARTS

in The School of Advanced International Studies

- KAREN PATRICIA ADLER, of Oyster Bay, N. Y., B. A. Wilson College, 1965.
- CHARLES HARRISON AGLE, of Princeton, N. J., B. A. Wesleyan University, 1963.
- CHARLES S. AHLGREN, of Neenah, Wis., B. A. Loras College, 1960.
- AYO EMEKA AZIKIWE, of Lagos, Nigeria, B. A. Michigan State University, 1964.
- ROBERT WILLIAM BACKOFF, of West Lafayette, Ind., A. B. University of Illinois, 1960.
- FRANCESCO BASCONE, of Bad Godesberg, Germany, Laurea, University of Pisa, 1965.
- ROBERT D. BOTJER, of Amityville, N. Y., B. A. Ohio Wesleyan University, 1965.
- JAY SANFORD BRICKMAN, of Mobile, Ala., B. A. University of Florida, 1964.
- HARALD BURMEISTER, of Hamburg, Germany, M. B. A. Harvard University, 1966.
- WILLIAM SCOTT BUTCHER, of Cincinnati, Ohio, A. B. Miami University, Ohio, 1964.
- KATHARINE AUGUSTA ECCLESTON CAMPBELL, of Paoli, Pa., B. A. Tufts University, 1963.
- CAROL G. CANNING, of Staunton, Va., A. B. Goucher College, 1965.
- JOSEPH CAVALLI, of Locarno, Switzerland, Dipl. Institute of Political Studies, Paris, 1965.
- JAMES PHILMORE COLLINS, JR., of Sanger, Calif., B. A. Occidental College, 1965.
- BEN W. CRAIN, of Dublin, Ga., B. A. The American University, 1965.
- LUC CROLLEN, of Brussels, Belgium, Lic. Catholic University of Louvain, 1964.
- ROGER JOHN DALEY, of Staten Island, N. Y., B. A. Hamilton College, 1965.
- JEROME D. DAVIS, of Yokohama, Japan, A. B. Oberlin College, 1965.
- CHRISTINE OCTAVIE DEBOUVRY, of Ste. Colombe les Vienne, France, Lic. University of Lyons, 1963; Dipl. Institute of Political Studies, Paris, 1965.
- WALTER HERBERT DIXON, JR., of Danville, Va., B. A. Duke University, 1964.
- ETTORE DI ZIO, of Citta S. Angelo, Italy, Certificate Institute of Political Studies, Paris, 1964.
- LAWRENCE JULIAN DROUTMAN, of New York, N. Y., B. A. Princeton University, 1965.
- R. ALLEN EMRICII, of Lake Oswego, Oreg., B. A. University of Oregon, 1965.
- DAVID ARNOLD ERBE, of Racine, Wis., B. A. St. Olaf College, 1963.
- BART STEVEN FISHER, of Clayton, Mo., B. A. Washington University, 1963.
- LYNNE FOLDESSY, of Ogden Dunes, Ind., B. A. Smith College, 1965.
- BARBARA RICE FRENCH, of Buffalo, N. Y., A. B. Pembroke College, 1965.
- SUSAN M. GAFFNEY, of DuBois, Pa., B. A. Wilson College, 1965.
- THEODOR WILLIAM GALDI, of Albuquerque, N. Mex., B. A. The University of New Mexico, 1965.
- RICHARD GILMORE, of Omaha, Nebr., A. B. Columbia University, 1965.
- DENNIS C. GOODMAN, of Cleveland, Ohio, A. B. Dartmouth College, 1960.
- JACQUES J. GORLIN, of New York, N. Y., A. B. Columbia University, 1965.
- OMAR GRINE, of Maghnia, Algeria, Dip. School of Chemistry, Paris, 1963.
- RICHARD E. HECKLINGER, of Camillus, N. Y., B. A. St. Lawrence University, 1965.
- ELEANOR HICKS, of Cincinnati, Ohio, B. A. University of Cincinnati, 1965.
- MARY ELLEN HURLBUTT, of Davenport, Iowa, B. A. Smith College, 1965.
- DONALD JAMES HUSE, of Temple City, Calif., B. A. Stanford University, 1965.
- VIRGINIA JOHANNSEN, of Watertown, Wis., B. A. University of Wisconsin, 1964.
- SHEILA IRIS KAPLAN, of Brooklyn, N. Y., B. A. Hunter College, 1965.
- RADEN HASSAN SAMPURNA KARTADJOEMENA, of Djakarta, Indonesia, B. S. F. S. Georgetown University, 1964.
- BOGDAN KRYCA, of Chwalibogowice, Poland, Certificate University of Warsaw, 1961.
- GEORGE LOUDON, of Velsen, The Netherlands, B. A. Oxford University, 1964.
- ELENA SABIN MANNES, of New York, N. Y., B. A. Smith College, 1965.

- WOLFGANG MAYER, of Graz, Austria, Dr. juris University of Graz, 1964.
- WALDO MAZELIS, of Cleveland, Ohio, B. S. Case Institute of Technology, 1964.
- WILLIAM DENNIS McCARTY, of Anderson, Ind., B. A. Wabash College, 1965.
- MARGARET ANN MILLER, of Lincoln, Nebr., B. A. Nebraska Wesleyan University, 1965.
- PHILIP WILLIAMS MOELLER, of Fort Madison, Iowa, B. A. St. Olaf College, 1963.
- CHARLES E. MORRISON, of Billings, Mont., B. A. The Johns Hopkins University, 1965.
- HENRY R. NAU, of Arlington, Va., B. S. Massachusetts Institute of Technology, 1963.
- STEVEN D. NORRIS, of Melrose, Mass., B. A. University of New Hampshire, 1965.
- ROBERT LANDEN NUSSBAUMER, of Webster Groves, Mo., B. A. Southern Methodist University, 1963.
- JOHN SANFORD PARSONS, of Torrington, Conn., B. A. Dartmouth College, 1962.
- GIANFRANCO PASQUINO, of Turin, Italy, Laurea University of Turin, 1965.
- ALAN ARTHUR PLATT, of Oakland Gardens, N. Y., A. B. Princeton University, 1965.
- JEFFREY RECORD, of Portland, Oreg., B. A. Occidental College, 1965.
- FLOYD A. RIGGS, of Washington, D. C., B. A. The George Washington University, 1965.
- JAMES MICHAEL ROARK, of Los Angeles, Calif., A. B. University of Southern California, 1965.
- ELLEN ELIZABETH ROBINSON, of Miami, Okla., B. A. Newcomb College, 1965.
- JOSEPH ROBY III, of New York, N. Y., B. A. Yale University, 1963.
- ROMANO ROMANI, of Washington, D. C., B. S. F. S. Georgetown University, 1964.
- STEPHEN ROSENBERG, of New York, N. Y., B. A. Queens College, 1965.
- CHRISTOPHER WADE S. ROSS, of Washington, D. C., A. B. Princeton University, 1965.
- MONICA EVA RUBENS, of Dover, N. J., B. A. Hood College, 1963.
- BONNIE DULING SALANGO, of Ellicott City, Md., B. S. F. S. Georgetown University, 1965.
- WILLIAM TALLMADGE SALISBURY, of Oswego, N. Y., B. A. Swarthmore College, 1959.
- DONALD H. SCHARFE, of Pittsburgh, Pa., B. A. Harvard University, 1961; M. A. University of California, 1962.
- PATRICIA E. SCHRAUD, of Chula Vista, Calif., A. B. Stanford University, 1965.
- MURRAY GREGG SMITH, of Prairie City, Oreg., B. A. University of Oregon, 1963.
- MATTHEW JOHN STOREY, of Chatham, N. J., B. A. Williams College, 1965.
- DAVID P. THOMAS, of Syracuse, N. Y., B. A. Syracuse University, 1965.
- SARAH LIVINGSTON TIMPSON, of New York, N. Y., B. A. Smith College, 1960.
- MICHAEL DAVID TIRADO, of Los Angeles, Calif., B. A. University of Southern California, 1964; M. A. Middlebury College, 1965.
- JAMES L. WHITELEY, of Lancaster, Pa., B. A. Oberlin College, 1958.
- PAUL EDMUND WILLINGHAM, JR., of Ridgely, Tenn., B. A. University of North Carolina, 1957; B. D. Vanderbilt University, 1964.

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DOCTORS OF PHILOSOPHY

*in The School of Advanced International Studies
with titles of dissertations*

- W. ANDREW AXLINE, of Columbus, Ohio, B. A. The Ohio State University, 1962.
Legal and Organizational Growth in Europe: An Approach to the Study of Integration.
- GEORGE WALLACE GRAYSON, JR., of Alexandria, Va., A. B. University of North Carolina, 1960; M. A. School of Advanced International Studies, The Johns Hopkins University, 1963.
Chilean Christian Democratic Party: Genesis, Development and Ideology.
- THOMAS MUZZY MILLINGTON, of Saddle River, N. J., B. A. Williams College, 1961; M. A. School of Advanced International Studies, The Johns Hopkins University, 1964.
The Latin American Diplomacy of Sumner Welles.
- BARBARA RIEMAN, of Madison, Wis., B. A. University of Wisconsin, 1958; M. A. Stanford University, 1962.
More, Faster, Better and Cheaper—Dilemmas of Chinese Industrial Price, Indicator, and Reward Policies.

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DOCTORS OF MEDICINE

- HENRY DAVID ABRAHAM, of Philadelphia, Pa., B. S. Muhlenberg College, 1963.
- ALAN VICTOR ABRAMS, of Brookline, Mass., B. A. Harvard University, 1963.
- BLANCHE PEARL ALTER, of Willowdale, Ont., Canada, A. B. Radcliffe College, 1963.
- JAMES TILLMAN ANDERSON, of Knoxville, Tenn., B. A. Dartmouth College, 1963.
- LARRY GARDNER ANDERSON, of Norwood, Ohio, B. A. Harvard University, 1963.
- FRANK RUDOLF BARTA, JR., of Omaha, Nebr., A. B. Creighton University, 1962.
- RALPH C. BENSON, JR., of Portland, Oreg., B. A. Stanford University, 1963.
- JASON CORDELL BIRNHOLZ, of Newark, N. J., B. S. Union College, 1963.
- SIDNEY ROBERT BLOCK, of Baltimore, Md., B. A. The Johns Hopkins University, 1964.
- JOHN BOOKHOUT BOURLAND, JR., of Dallas, Texas, A. B. Princeton University, 1963.
- JACK SOLOMON BRANDES, of Kemptville, Ont., Canada, B. S. McGill University, 1963.
- RICHARD SAMUEL BRANSFORD, of Compton, Calif., A. B. University of California, Los Angeles, 1962.
- CHARLES STONE BRYAN, of Columbia, S. C., B. A. The Johns Hopkins University, 1964.
- RICHARD LEA CALLAWAY, of Maryville, Tenn., B. S. Davidson College, 1963.
- ALFRED MARTIN COHEN, of Teaneck, N. J., A. B. Cornell University, 1963.
- MICHAEL JOSEPH CURTIN, of Chicago, Ill., B. S. Loyola University, 1963.
- EMILY E. CZAPEK, of Metuchen, N. J., B. A. Wells College, 1963.
- A. J. DARIN DE LORENZO, of Baltimore, Md., A. B. Wabash College, 1948; M. A. The Johns Hopkins University, 1950; Ph. D. Washington University, 1956.
- RICHARD ALLEN FINLEY, of New York, N. Y., B. A. University of Michigan, 1963.
- LEWIS KEITH FRASER, of Florence, Ala., B. S. Davidson College, 1963.
- WILLIAM JAMES FREEMAN, of Colfax, Wash., B. A. University of Washington, 1963.
- JOHN ANTHONY GALOTTO, of Hawthorne, N. J., B. A. The Johns Hopkins University, 1963.
- ROBERT LEE GAMBLE, of Washington, D. C., B. S. Howard University, 1963.
- RICHARD WILLIAM GARNER, of Port Alberni, B. C., Canada, B. S. University of British Columbia, 1963.
- ANTONIO GONZALEZ-REVILLA, JR., of Panama, Republic of Panama, B. S. Yale University, 1963.
- JOHN D. GRABER, of Wayland, Iowa, B. A. State University of Iowa, 1963.
- LAMAN ALEXANDER GRAY, JR., of Louisville, Ky., B. A. Wesleyan University, 1963.
- ROBERT ALAN GREENWALD, of New Hyde Park, N. Y., B. A. The Johns Hopkins University, 1964.
- PAUL JOSEPH GREGORY, of Saratoga, Calif., A. B. University of California, Berkeley, 1962; M. A. Yale University, 1963.
- RALPH A. GRUPPO, of North Collins, N. Y., B. S. Canisius College, 1963.
- ROBERT WILLIAM GUYNN, of Toledo, Ohio, B. A. Michigan State University, 1963.
- JAMES BERNER HAMAKER, of Indianapolis, Ind., B. A. DePauw University, 1963.
- RICHARD CHRISTIAN HESS, JR., of Stratford, Conn., B. A. The Johns Hopkins University, 1964.
- ELLIOTT HINKES, of Kensington, Md., B. A. The Johns Hopkins University, 1964.
- HARRY FAYETTE HOLCOMB, JR., of Oklahoma City, Okla., B. S. Oklahoma State University, 1962.
- STEPHEN ANDREW HOWLETT, of Arlington, Va., B. A. The Johns Hopkins University, 1964.
- RICHARD LEWIS HURWITZ, of Portland, Maine, B. A. The Johns Hopkins University, 1961.
- WILLIAM DAVID JACK II, of Miami Beach, Fla., B. S. Yale University, 1963.
- ELIZABETH HADLEY JANSSON, of Manitowoc, Wis., B. A. Mount Holyoke College, 1963.
- JACQUELINE JONES, of Stratford, Conn., B. A. Drew University, 1963.
- THORNTON KELL, JR., of Ardmore, Okla., B. S. University of Oklahoma, 1963.
- ELLIOTT DAN KIEFF, of Philadelphia, Pa., A. B. University of Pennsylvania, 1963.
- WALTER EDGAR KOCH, of Richmond Hill, N. Y., B. A. The Johns Hopkins University, 1964.
- GORDON STUART LIVINGSTON, of Albany, N. Y., B. S. United States Military Academy, 1960.
- MARK LEE LOWMILLER, of Shelby, Ohio, B. A. Dartmouth College, 1964.

- MICHAEL WILLIAM MAINEN, of Baltimore, Md., A. B. Brown University, 1963.
- VINCENT CHARLES MANGANIELLO, of Jersey City, N. J., A. B. St. Peter's College, 1959; Ph. D. The Johns Hopkins University, 1966.
- JOHN CHARLES MANGRUM, of Lewisville, Texas, B. A. The Johns Hopkins University, 1964.
- ALLAN WAYNE MARCH, of Cleveland, Ohio, B. A. Dartmouth College, 1963.
- RICHARD KEMP MASSENGILL, of Raleigh, N. C., A. B. Duke University, 1963.
- TERENCE WILLIAM McGRATH, of Madison, Wis., B. A. The Johns Hopkins University, 1964.
- MARVIN CALVIN MENGEL, of Allentown, Pa., B. A. The Johns Hopkins University, 1964.
- RICHARD JOEL METZNER, of Beverly Hills, Calif., B. A. Stanford University, 1963.
- PAUL ELLIOTT MICHELSON, of Albany, N. Y., B. A. The Johns Hopkins University, 1964.
- DONNA MILDVAN, of Philadelphia, Pa., A. B. Bryn Mawr College, 1963.
- MOHAMMAD HOSSEIN MIR-SEPASI, of Teheran, Iran, A. B. Washington University, 1963.
- CHARLES HENRY MITCHELL IV, of Augusta, Ga., B. S. Davidson College, 1963.
- JOE LAWRENCE MOAKE, of San Antonio, Texas, B. A. The Johns Hopkins University, 1964.
- JAMES ANTHONY MOSSO, of Pittsburgh, Pa., B. A. The Johns Hopkins University, 1964.
- MARTIN GROSVENOR MYERS, of Washington, D. C., A. B. Princeton University, 1963.
- JAMES FRANCIS NABWANGU, of Kakamega, Kenya, B. A. The Johns Hopkins University, 1964.
- DAVID JOHN NEWMAN, of Wenatchee, Wash., B. A. University of Washington, 1963.
- HOWARD KENNETH NEWMAN, of White Plains, N. Y., B. A. Harvard University, 1963.
- THOMAS WILLINGHAM NEWSOME, of Dallas, Texas, A. B. Princeton University, 1963.
- RICHARD JOHN OWELLEN, of Baltimore, Md., B. S. Rensselaer Polytechnic Institute, 1957; Ph. D. Carnegie Institute of Technology, 1961.
- MARSHALL PLAUT, of Baltimore, Md., B. A. The Johns Hopkins University, 1963.
- PETER HOWARD RHEINSTEIN, of Baltimore, Md., B. A. Michigan State University, 1963; M. S. Michigan State University, 1964.
- JOHN VINCENT LoCHIRCO RUSSO, of Arlington, Va., B. A. Brown University, 1960.
- JOEL SHELDON SANDBERG, of Flushing, N. Y., B. A. The Johns Hopkins University, 1964.
- FRANCIS JOSEPH SCARPA, of Derby, Conn., B. A. College of the Holy Cross, 1963.
- JUDITH ANN SENSENBRENNER, of Mill Hall, Pa., B. S. Bucknell University, 1963.
- ISSAM JOHN SHAKER, of Lakewood, Ohio, B. A. The Johns Hopkins University, 1964.
- DAVID JOSEPH SHAW, of Baltimore, Md., B. A. The Johns Hopkins University, 1964.
- STEVEN LEWIS SHORE, of Philadelphia, Pa., A. B., A. M. University of Pennsylvania, 1963.
- JOEL BRUCE SHULMAN, of Sherman Oaks, Calif., A. B. Stanford University, 1963.
- FRANCINE MARTHA SIEGAL, of Rosedale, N. Y., B. A. The Johns Hopkins University, 1963.
- RODNEY JESSE SIMONSEN, of Portland, Oreg., B. A. The Johns Hopkins University, 1960.
- BARRY L. SINGER, of Brookline, Mass., A. B. Harvard University, 1963.
- RONALD EDWARD SMITH, of Walkersville, Md., B. A. The Johns Hopkins University, 1964.
- JOHN ROOT STONE, of Miami, Fla., B. A. Emory University, 1963.
- JAMES WALTER TAYLOR, of Roselle, N. J., B. A. The Johns Hopkins University, 1963.
- ROBERT JAY TEMPLE, of Tucson, Ariz., B. A. University of Arizona, 1963.
- RICHARD MINOR TIMMS, JR., of Elyria, Ohio, B. A. The Johns Hopkins University, 1964.
- RICHARD JAMES UGORETZ, of St. Louis, Mo., B. S. University of Michigan, 1960.
- JOHN SUTHERLAND URBANETTI, of Manchester, Conn., B. A. The Johns Hopkins University, 1964.
- JOHN WIMBURN WALLACE, of Mamaroneck, N. Y., B. A. University of Michigan, 1963.
- RICHARD DENNIS WASNICH, of Montpelier, Ohio, B. A. The Johns Hopkins University, 1964.
- ROBERT RALPH WEIHING, of Beaumont, Texas, B. A. Rice Institute, 1959; Ph. D. The Johns Hopkins University, 1965.
- DANIEL WEISZ, of Rosedale, N. Y., B. S. The College of the City of New York, 1963.

MASTERS OF ARTS

in The School of Medicine

with titles of essays

- DIANE LOUISE KAUFMAN ABELOFF, of Bronx, N. Y., B. A. The City College of New York, 1964. Art As Applied to Medicine.
Experimental Models to Study the Alteration of Small Intestinal Mucosa—Pathological and Developmental Conditions.
- ELLEN ELIZABETH GOING, of Haddonfield, N. J., B. F. A. Syracuse University, 1965. Art As Applied to Medicine.
An Animated (cine-) Study of Normal Oropharyngeal Swallowing.
- LINDA CAROL HOLMES, of Hattah, Okla., B. S. University of Oklahoma, 1964. Human Genetics.
The Meiotic Chromosomes of Man.
- ROBERT PAUL HUDSON, of Kansas City, Kans., B. A. University of Kansas, 1949; M. D., 1958. History of Medicine.
Patterns of Medical Education in Nineteenth Century America.
- MARILYN SUE KOZAK, of Akron, Ohio, B. S. Marygrove College, 1965. Microbiology.
Studies on the Purification and Chemical Properties of Rabbit Granulocytic Pyrogen.

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DOCTORS OF PHILOSOPHY

in The School of Medicine

with titles of dissertations

- ARNOLD IRWIN CAPLAN, of Chicago, Ill., B. S. Illinois Institute of Technology, 1963. Physiological Chemistry.
Biochemical and Ultrastructural Properties of Osmotically Lysed Rat-Liver Mitochondria.
- HAROLD EUGENE CROSS, of Baltimore, Md., B. A. Goshen College, 1960; M. D. The Johns Hopkins University, 1964. Human Genetics.
Genetic Studies in an Amish Isolate.
- FRITZ ALBERT HENN, of Bethlehem, Pa., B. A. Wesleyan University, 1963. Physiological Chemistry.
The Structure of Thin Phospholipid Membranes.
- DAVID LAWRENCE JACKSON, of Baltimore, Md., B. A. The Johns Hopkins University, 1961. Physiology.
A Hypothalamic Region Responsive to Localized Injection of Pyrogens.
- BARRY HUBERT KAPLAN, of Bronx, N. Y., A. B. New York University, 1958; M. D. The Johns Hopkins University, 1962. Physiological Chemistry.
Ethanolamine Deaminase: A Cobamide-Requiring Enzyme.
- DAVID LAWRENCE RIMOIN, of Montreal, Que., Canada, B. S. McGill University, 1957; M. S., M. D. and Master of Surg., 1961. Human Genetics.
Genetic Disorders of the Endocrine Glands.

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MASTERS OF SCIENCE IN ENGINEERING

with titles of essays

- MATTHEW O'CONNOR BURROUGHS, of Baltimore, Md., B. S. E. The Johns Hopkins University, 1963. Operations Research and Industrial Engineering.
The Use of Discriminant Analysis for the Measurement of Quality of Patient Care.
- HOWARD MORGAN EVANS, of Philadelphia, Pa., B. S. Swarthmore College, 1965. Environmental Engineering Science.
Dams in the Grand Canyon: A Study of the Central Arizona Project.
- WILLARD LEE GRAVES, JR., of Springfield, Mo., B. S. Drury College, 1962; B. E. S. The Johns Hopkins University, 1965. Environmental Engineering Science.
An Approach to the Study of Heated Discharges.
- JAMES PAUL HAUCK, of Girdletree, Md., B. E. S. The Johns Hopkins University, 1965. Chemical Engineering.
A Transient Response Method for Experimental Tests of Theoretical Mass Transfer Models for Gas-Liquid Dispersions.

- PETER BENT JOHNSON, of Chevy Chase, Md., B. S. in E. E. Purdue University, 1960. Electrical Engineering.
Least Squares Digital Filtering in the Presence of Non-stationary Noise.
- S. KRISHNAMURTHY, of Bombay, India, B. Ch. Eng. University of Bombay, 1963. Chemical Engineering.
Entanglement of Polymers.
- WILLIAM GOLDIE MCGRUTHER, of Wayne, N. J., B. S. Syracuse University, 1965. Operations Research and Industrial Engineering.
Course Scheduling and Student Assignment.
- JEAN-PATRICE NETTER, of Paris, France, Dipl. in Eng. Central School of Arts and Manufactures, Paris, 1964. Operations Research and Industrial Engineering.
Finding Elementary Chains with a Limited Number of Edges in a Mathematical Graph.
- CHARLES DAVID PACK, of Gainesville, Texas, B. E. E. University of Delaware, 1965. Operations Research and Industrial Engineering.
A Polynomial Approximation Technique for Solving Large Dynamic Programming Problems.
- VARSHA CHIMANLAL SHAH, of Ahmedabad, India, B. A. Gujarat College, 1960; M. A., 1962. Operations Research and Industrial Engineering.
An Analytical Approach to Manpower Problems.
- ARTHUR LARRY SMITH, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1964. Operations Research and Industrial Engineering.
Application of the Critical Path Method to Projects with Two Dependent Activity Durations.
- HOWARD JOHNSON WAYT, of Richmond, Va., B. S. Phys. Virginia Polytechnic Institute, 1957. Biomedical Engineering.
Epiphyseal Uptake of Radioactive Strontium as a Measure of Growth Rate.
- JOHN MACK WINTER, JR., of Baltimore, Md., B. S. in Physics Massachusetts Institute of Technology, 1957. Mechanics.
The Development of Rolling and Recrystallization Textures in Copper Single Crystals.
- WILLIAM JOSEPH WISEMAN, JR., of Baltimore, Md., B. E. S. The Johns Hopkins University, 1964. Electrical Engineering.
On the Representation of Lightly Damped Transients.

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MASTERS OF ARTS IN TEACHING

- GAYLE MCCLELLAND ADAMS, of Chicopee, Mass., B. A. Elmira College, 1966.
- SUSAN SONYA ARONS, of Newark, N. J., B. A. Elmira College, 1965.
- BONNIE DEE BARON, of Alexandria, Va., B. A. Wellesley College, 1966.
- ROBERT ALTON BRIGGS, of Essex Junction, Vt., B. A. Dartmouth College, 1966.
- ALDEN FRANK BRISCOE, of Lakeville, Conn., A. B. Harvard University, 1963.
- DAVID CHARLES BRISTOL, of Des Moines, Iowa, B. A. Cornell College, 1966.
- CYNTHIA SMITH CALDWELL, of Chevy Chase, Md., B. A. Bryn Mawr College, 1966.
- PENELOPE MORGAN COLMAN, of Chautauqua, N. Y., A. B. The University of Michigan, 1966.
- CHARLES PARKER CRAWFORD, of Wayne, Pa., B. A. Williams College, 1966.
- MARY LORA CROWLEY, of Arlington, Va., B. A. Miami University, Ohio, 1966.
- LAUREN LOUISE HEINBAUGH DARLING, of Audubon, N. J., A. B. Mount Holyoke College, 1964.
- FRANCIS XAVIER DEGEN, of New York, N. Y., B. S. Iona College, 1966.
- JAMES CLYDE DEMERSEMAN, of Boulder, Colo., B. A. University of Colorado, 1966.
- MARJORIE JEANNE EALES, of Sayville, N. Y., B. A. Denison University, 1965.
- JUDITH HARNED EDINGER, of Baltimore, Md., A. B. Goucher College, 1965.
- DAVID BALDWIN ESPEY, of Elmira, N. Y., A. B. Hamilton College, 1962.
- EMILY JANE FITZGIBBONS, of Lakewood, Ohio, B. A. Swarthmore College, 1965.
- VICKI FRANCINE FLAKS, of Bronx, N. Y., B. A. The City College of New York, 1965.
- JUDITH MARY GILL, of Westfield, N. J., B. A. College of Saint Elizabeth, 1965.
- BETTY ANN GOLDSTEIN, of New York, N. Y., B. A. The University of Wisconsin, 1966.
- PHYLLIS KENT GREENWOOD, of Enka, N. C., A. B. Duke University, 1966.
- SUSAN LYNN HALLOCK, of Riverhead, N. Y., B. A. Wellesley College, 1966.

- BETTY LEE JACOBS, of Denver, Colo., A. B. Cornell University, 1965.
- MARY ANN LOCASTO, of Garden City, N. Y., B. A. Marymount College, 1966.
- PHYLLIS DAY MARTIN, of Syracuse, N. Y., B. S. St. Lawrence University, 1966.
- FRANCIS JOSEPH MASCI, of Brooklyn, N. Y., B. S. George Washington University, 1965.
- PEGGY ANN MEDINA, of Taos, N. Mex., B. A. The College of Wooster, 1966.
- LINDA GERTRUDE MIDDLESTADT, of Baltimore, Md., B. A. Washington College, 1966.
- LINDA BRYAN PALMER MURALIDHARAN, of Schenectady, N. Y., A. B. Smith College, 1960.
- SANDRA LOUISE NIMRO, of Washington, D. C., B. A. Seton Hill College, 1962.
- ELIZABETH HARRIET OLSON, of Mankato, Minn., B. A. St. Olaf College, 1966.
- GENEVIEVE ALVERTA PALMER, of Baltimore, Md., B. A. Goucher College, 1965.
- PATRICIA ANN PAUL, of Houston, Texas, B. A. The University of Texas, 1966.
- MARGARET FOLLIN HUGHES RAKOWSKY, of Bethesda, Md., B. S. Denison University, 1965.
- MARY JANE SIMERL RODEHEFFER, of Greenwich, Conn., A. B. Oberlin College, 1964.
- ABIGAIL RUTH GRODNER SMITH, of New York, N. Y., A. B. Wheaton College, 1960.
- MARY LOWNDES SMITH, of Columbia, S. C., B. A. Agnes Scott College, 1965.
- MARY ANN SPIECZNY, of Middlesex, N. J., A. B. Smith College, 1966.
- CAROL LOUISE SWANSON, of West Hartford, Conn., A. B. Middlebury College, 1966.
- CHERYL MARGARET SWEENEY, of Keene, N. H., A. B. Emmanuel College, 1966.
- JANE ANNE TEMPLETON, of Knoxville, Iowa, B. A. Simpson College, 1966.
- THOMAS TLOU, of Gwanda, Rhodesia, B. A. Luther College, 1965.
- ANN UNVERZACT, of Pittsburgh, Pa., B. A. Denison University, 1966.
- FRANCES AMELIA UPTHIEGROVE, of St. Louis, Mo., A. B. Vassar College, 1963.
- PAULINE MARY VIDA, of Berwyn, Ill., B. A. Rosary College, 1966.
- CAROL LOUISE VIERTTEL, of Wantagh, N. Y., B. A. Susquehanna University, 1966.
- FREDERICA WACHTEL, of Chicago, Ill., A. B. The University of Michigan, 1966.
- BETTY LOUISE WALLACE, of Bristol, Tenn., B. A. King College, 1966.
- PATRICIA GEPPERT WINFREE, of Rochester, N. Y., A. B. Cornell University, 1965.
- CHARLES BENJAMIN WRIGHT, of Minneapolis, Minn., B. A. The University of Wisconsin, 1966.
- ERIC BEIDLER YONKER, of Elkins Park, Pa., B. S. in Ch. Eng. Lehigh University, 1965.
- MARIA ANN ZELLER, of Athens, Pa., A. B. Trinity College, Washington, D. C., 1966.

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MASTERS OF ARTS

with titles of essays

- HENRY SIGFRED ANDERSEN, of Long Island, N. Y., B. S. The City College of New York, 1963. Oceanography.
A Method for Summarizing Water Characteristics with-
in Arbitrary Oceanographic Areas.
- KENNETH LLOYD ARNOLD, of Annandale, Va., B. A. Lynch-
burg College, 1966. Writing Seminars.
A Collection of Poems.
- ALAN SHERMAN BELL, of Bronx, N. Y., B. A. Dartmouth
College, 1964. Romance Languages.
- SILVIA MARTA VISSCHER BELL, of Buenos Aires, Argentina,
B. A. Queens College, 1964. Psychology.
- WILLARD BERNARDIN, of Fairfield, Conn., B. A. Purdue
University, 1965. Writing Seminars.
A Novel.
- MIREILLE FRANCE BERTRAND, of Morainvilliers, France,
L. es Sc. University of Paris (Sorbonne), 1959; L. es Sc.
University of Caen, 1960. Psychology.
- JONATHAN ALAN BOTELHO, of Fairhaven, Mass., B. A. Bow-
doin College, 1963. Romance Languages.
- GEORGE CONRAD BROWN, JR., of Baltimore, Md., A. B. Syra-
cuse University, 1953; M. A. The University of Buffalo,
1959. Physics.

- STEVEN JORDAN BROWN, of Worcester, Mass., B. A. Clark University, 1966. Classics.
- PATRICK GRADY BUCKLEY, of Cassadaga, N. Y., B. A. Canisius College, 1966. German.
- MICHAEL ASHTON BURLINGAME, of Washington, D. C., A. B. Princeton University, 1964. History.
- NORMAN L. BUSKE, of Baltimore, Md., B. A. University of Connecticut, 1964. Oceanography.
A Mercury-Standard Conductivity Meter.
- JOSEPH JOHN CARDARELLI, of Washington, D. C., B. S. University of Maryland, 1965. Writing Seminars.
A Collection of Poems.
- PETER EDGERTON CARELS, of Alexandria, Va., A. B. Oberlin College, 1966. German.
- ANTHONY KIMBER CASSEL, of Toronto, Ont., Canada, B. A. University of Toronto, 1963. Romance Languages.
- ROBERT THEODORE CHARLTON III, of Chelmsford, Mass., B. A. Wesleyan University, 1966. Writing Seminars.
Stories, Fancies, and One-Act Plays.
- ROBERT FRANCIS CIAPETTA, of Silver Spring, Md., A. B. University of Pennsylvania, 1963; LL. B. Georgetown University, 1966. Writing Seminars.
Two One-Act Plays, a Story, and a Collection of Poems.
- WILLIAM RICHARD COFFEL, of Far Rockaway, N. Y., B. A. Washington College, 1966. Writing Seminars.
A Collection of Poems.
- PENELOPE SALES CORDISH, of Baltimore, Md., A. B. Goucher College, 1962; M. A. University of California, Berkeley, 1964. English.
- SIGRID IRMGARD DAFFNER, of Salem, Va., B. A. Mary Washington College, 1965. German.
- VINCENT JOSEPH DELL'ORTO, of Clifton, N. J., A. B. Saint Peter's College, 1966. German.
- MARILYN ELIZABETH DEMOREST, of Hamden, Conn., A. B. Trinity College, Washington, D. C., 1965. Psychology.
- WILLIAM HARVEY DOBELLE, of Baltimore, Md., B. A. The Johns Hopkins University, 1964. Biophysics.
The Visual Pigments of Primate Cones.
- SYLVIA JUTTA KRAEMER DOUGHTY, of Washington, D. C., A. B. Hollins College, 1965. History.
- JOHN SANFORD DUGAN, of Baltimore, Md., B. A. Yale University, 1960. Romance Languages.
- WYATT BEAZLEY DURRETTE, JR., of Franklin, Va., B. S. Virginia Military Institute, 1961. Political Science.
Mr. Justice White and Due Process: New Views and Old Challenges.
- SUZANNE CHANNING ELLERY, of Philadelphia, Pa., B. A. Radcliffe College, 1964. History.
- ROBERT TEMPLE EMMET, of Baltimore, Md., A. B. Colby College, 1964. Oceanography.
Direct Spectrophotometric Determination of Ammonia in Natural Waters by the Phenol-hypochlorite Reaction.
- PETER ANDERSON FELLOWES, of Wheaton, Ill., A. B. Colgate University, 1966. Writing Seminars.
A Collection of Poems.
- CLAUDE LESTER FENNEMA, JR., of San Mateo, Calif., B. S. Massachusetts Institute of Technology, 1963. Mathematics.
- ANTHONY JOSEPH FERRARA, of Highland Park, N. J., A. B. Temple University, 1962. Near Eastern Studies.
- DAVID JOHN FRUIN, of Hemel Hempstead, Herts., England, B. A. Hull University, 1961; M. A. in Psychology University of London, 1965. Psychology.
- GLEN ROSS GALE, of Baltimore, Md., B. A. Dartmouth College, 1963. Romance Languages.
- JOHN HALE GETGOOD, of Tulsa, Okla., B. S. United States Military Academy, 1960. Chemistry.
- JAMES PRESTON GIRARD, of Wichita, Kans., B. A. The University of Kansas, 1966. Writing Seminars.
A Portion of a Novel.
- PATRICIA MEREDITH GREER, of Baltimore, Md., A. B. College of Notre Dame of Maryland, 1966. Writing Seminars.
A Collection of Poems.
- GEORGINA SABAT GUERNICA, of Santiago de Cuba, Dipl. University of Oriente, Cuba, 1960. Romance Languages.
- MARY ANN THOMAS HANDEL, of Chapel Hill, N. C., A. B. Goucher College, 1965. Biology.
- WILLIAM HARRY HARADER, of Fort Wayne, Ind., B. A. Wabash College, 1964. Political Science.
An Introduction to the Veterans' Lobby.
- SAMUEL ARTHUR HAY, of Jupiter, Fla., B. A. Bethune-Cookman College, 1959. Writing Seminars.
A Play.
- WILLIAM NAPOLEON HENDRICKS III, of Lebanon, Va., B. A. The College of William and Mary, 1966. Classics.
- NANCY MAIN HENLEY, of Baltimore, Md., B. S. The Johns Hopkins University, 1964. Psychology.
- GEORGE FREDERICK HEWITT, of Montclair, N. J., A. B. Cornell University, 1966. Writing Seminars.
A Collection of Poems in Verse and Prose.
- HAROLD CLINTON HILL, of Washington, D. C., A. B. The George Washington University, 1966. German.
- MARY ANNE HOLMGREN, of New Shrewsbury, N. J., B. A. Ursinus College, 1966. German.
- ROBERT BRUCE HORSFALL, of Placentia, Calif., B. A. Reed College, 1964. Psychology.
- EVA MARIE HURTIG, of Sarnia, Ont., Canada, B. A. University of Western Ontario, 1964. Romance Languages.

- JOSEPH JOFFE, of Berlin, Germany, B. A. Swarthmore College, 1965. International Studies.
Germany and the Atlantic Alliance, 1961-1967: Exploring the Constraints of Dependence.
- LATHROP PARK JOHNSON, of Teheran, Iran, A. B. Princeton University, 1966. German.
- HELGA MARIA JONES, of Bolsterland-Oberstdorf, Germany, A. B. Mount Holyoke College, 1961. Political Science.
Some Principal Issues in Julius Stone's Theory of International Law.
- CAROLYN RAE LURY KARCHER, of Washington, D. C., Certificate of Political Studies, University of Paris, 1965. English.
Herman Melville's *The Confidence-Man: His Masquerade: An April Fool's Day Apocalypse*.
- NORMAN ROBERT KELLY, of Whitefield, N. H., B. A. University of New Hampshire, 1957. Writing Seminars.
A Portion of a Novel.
- AUBREY CARL KING, of Jaeger, W. Va., B. A. Marshall College, 1963. Political Science.
A New Approach to Inter-governmental Relations: The Appalachian Regional Development Program and Its Implementation in West Virginia.
- MALLORY PALMER KING, of Baltimore, Md., B. A. Chatham College, 1966. Writing Seminars.
A Collection of Poems.
- HEIDRUN THORA KNAUSENBERGER, of State College, Pa., German.
- MARK CRISPIN KNOPS, of Butler, N. J., A. B. Rutgers University, 1965. History.
The New Lands Program, 1954-1964.
- MICHAEL SEIBERT KOPPISCH, of Baltimore, Md., B. A. The Johns Hopkins University, 1964. Romance Languages.
- NILDE GERTRUDIS KRIEGHOFF, of Takoma Park, Md., B. A. Columbia Union College, 1964. Chemistry.
- KENNETH LEE LASSON, of Baltimore, Md., B. A. The Johns Hopkins University, 1963; LL. B. University of Maryland, 1966. Writing Seminars.
A Collection of Poems.
- FRANCIS JOSEPH LAWRENCE, JR., of Abington, Pa., B. A. LaSalle College, 1966. Writing Seminars.
A Portion of a Novel and a Long Poem.
- PAUL WALKER LAWRENCE, JR., of Memphis, Tenn., B. S. Southwestern at Memphis, 1962. Physics.
Theory of the Response of a Metal Bolometer to Chopped Irradiation and Discussion of Bolometric Pyrheliometers.
- MARCEL JOSEPH JEAN LEROY, of Halle, Brabant, Belgium, Dipl. Free University of Brussels, 1964. International Relations.
Latin American Unification: Historical Evolution and Present-Day Situation.
- MALCOLM LLOYD, of Chicago, Ill., B. A. Trinity College, Connecticut, 1962. Writing Seminars.
A One-Act Play and a Collection of Poems.
- PETER HOLLIDAY LORD, of Towson, Md., A. B. Princeton University, 1951; A. M., 1955. Mathematics.
- PAUL LUTZKER, of Baltimore, Md., A. B. University of Pennsylvania, 1965. Political Science.
The Congressional Committee as a Small Group.
- DAVID VINCENT McQUEEN, of Oelwein, Iowa, A. B. Antioch College, 1963. History of Science.
The Manchester Literary and Philosophical Society: Its Origins, Founding, and Early Years.
- KEITH HANSEN MESERVY, of Provo, Utah, A. B. Brigham Young University, 1951. Near Eastern Studies.
- RICHARD CHARLES MUEHLBERGER, of Boston, Mass., B. A. Wayne State University, 1964. History of Art.
William H. Ranlett and *The Architect*.
- MARY CUMMINS DARKEN MURRAY, of Irwin, Pa., A. B. Trinity College, Washington, D. C., 1964. Chemistry.
- MARK VICTOR NADEL, of Los Angeles, Calif., A. B. University of California, Berkeley, 1965. Political Science.
Police and Negroes in Los Angeles: The Role of Interest Groups.
- FRANK VICTOR OCCHIOGROSSO, of Plainview, N. Y., B. A. St. John's University, New York, 1965. English.
- THOMAS JOSEPH O'GRADY, of Baltimore, Md., B. A. University of Baltimore, 1966. Writing Seminars.
A Collection of Poems.
- BETTY JANE THOMAS OLEWILER, of York, Pa., B. A. University of Washington, 1939. Philosophy.
- MARILYN PAUL, of Silver Spring, Md., A. B. in Ed. The George Washington University, 1964. Education.
The Van Sickle Affair: A Case Study in Progressive School Reform.
- SUSANNA NEVIN PETERS, of Baltimore, Md., A. B. College of Notre Dame of Maryland, 1960. Romance Languages.
- JEFFREY ALAN PRUSSIN, of Baltimore, Md., B. A. University of California, Los Angeles, 1965. Political Science.
Toward an Adequate Interpretation of Thomas Paine.
- JAMES PRESTON PUSACK, of Westfield, N. J., German.
- JOAN MARGO RAFFELD, of Longmeadow, Mass., A. B. Hollins College, 1966. Writing Seminars.
A Collection of Poems.
- D. JOHN RUTLEDGE, JR., of Fayetteville, Tenn., A. B. The George Washington University, 1966. German.
- STEPHEN JOHN SALCHENBERGER, of Chicago, Ill., B. A. The Johns Hopkins University, 1963. Romance Languages.
- JOHN FRANK CHARLES SANDA, of Baltimore, Md., B. S. Rensselaer Polytechnic Institute, 1965. Geology.

- HIDEYUKI SASAKI, of Kofu-shi, Yamanashi-ken, Japan, B. S. E. University of Tokyo, 1960. Physics.
- JOHN ERIC SCHOFIELD, of Plymouth Meeting, Pa., B. A. Kenyon College, 1965. Political Science.
Old Light on the Nominating Process.
- JAMES WINFIELD SCOTT, of Des Plaines, Ill., B. A. The Johns Hopkins University, 1966. Writing Seminars.
A Filmscript Based on *The Confidence Man* by Herman Melville.
- PETER CARL SEDERBERG, of Minneapolis, Minn., B. A. University of Minnesota, 1965. Political Science.
The Right to Rule: The Process of Legitimation in Egypt, Iraq and Pakistan.
- JOHN ABERNATHY SMITH, of Pulaski, Tenn., B. A. Vanderbilt University, 1961. History.
- RICHARD WILLIAM STEELE, of Rockville, Md., B. A. Queens College, 1956; M. A. The University of Wisconsin, 1958. History.
- RONALD RICHARD STEINBERG, of Brooklyn, N. Y., B. A. Brooklyn College, 1965. English.
- KATHERINE MODINE TAYLOR, of Portland, Oreg., A. B. The George Washington University, 1966. German.
- ROBERT BLAKE TRUSCOTT, of Somers Point, N. J., A. B. Rutgers University, 1966. Writing Seminars.
A Collection of Poems.
- PAUL EUGENE VAN HEMEL, of Phelps, N. Y., B. S. Hobart College, 1965. Psychology.
- BRENNAN VAN HOOK, O. F. M., of Fair Lawn, N. J., B. A. St. Bonaventure University, 1952; M. A., 1956. Philosophy.
- DAVID SHELLEY WALKER, of Albermarle, N. C., B. A. University of North Carolina, 1962. Romance Languages.
- ROBERT THEODORE WANG, of Chevy Chase, Md., A. B. The George Washington University, 1964. History of Art.
- GILBERT LOREN WATSON III, of Chestertown, Md., B. A. Williams College, 1966. Writing Seminars.
A Portion of a Novel.
- GABRIEL PAUL WEISBERG, of Jamaica, N. Y., B. A. New York University, 1963. History of Art.
The Japanese Penetration of Parisian Art Culture in the Decade of the 1860's.
- AUGUSTINE STEPHEN WIEST III, of Baltimore, Md., B. A. The Johns Hopkins University, 1965. Writing Seminars.
A Collection of Poems.
- ANTHONY GEORGE WILDEN, of Shawnigan Lake, B. C., Canada. Romance Languages.
- DANIEL ANTHONY WILLIAMS, of Baltimore, Md., B. A. University of Maryland, 1964. Romance Languages.
- HILDA WING, of Moorestown, N. J., B. A. Middlebury College, 1962. Psychology.

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DOCTORS OF PHILOSOPHY

with titles of dissertations

- GAIL MESSINGER ALBERT, of Washington, D. C., B. A. Brooklyn College, 1962. Psychology.
Hyperreactivity in the Rat Following Frontal Pole Ablation.
- PETER IRA BERMAN, of Brooklyn, N. Y., A. B. Cornell University, 1960. Political Economy.
A Theoretical and Empirical Examination of Large Bank Use of the Discount Facility in the United States.
- CHARLES EDWARD BLACKORBY, of Eau Claire, Wis., B. A. Harvard University, 1963. Political Economy.
Rational Rules for Intertemporal Decision Making.
- DANIEL ARTHUR BLOCH, of Palo Alto, Calif., B. S. Stanford University, 1963. Statistics.
Some Problems in Statistical Inference.
- HERBERT HASKELL BLUMBERG, of Philadelphia, Pa., B. A. Haverford College, 1963; M. A. The Johns Hopkins University, 1965. Psychology.
Liking and the Perception of Liking: Changes over Time.
- SARANE SPENCE BOOCOCK, of Baltimore, Md., B. A. Vassar College, 1957; M. A. Rutgers University, 1961. Social Relations.
The Effects of Games with Simulated Environments upon Student Learning.
- CLEOPHAS WILFRED BOUDREAU, of Gainesville, Fla., B. A. Boston University, 1957; M. A. University of Rochester, 1959. Romance Languages.
Dialectical Elements in the Ontology of Unamuno's Fiction and Drama.
- WILLIAM MILLARD BRELSFORD, of Rochester, N. Y., B. S. Bucknell University, 1962; M. S., 1963. Statistics.
Probability Predictions and Time Series with Periodic Structure.
- KENNETH MICHAEL BROWN, of St. Paul, Minn., B. A. University of Notre Dame, 1961. Political Economy.
Efficiency, Profits, and the Regional Growth of Manufacturing in the United States.

- ELEANOR STEPHENS SMALL BRUCHEY, of Baltimore, Md., B. A. Bryn Mawr College, 1955. History.
The Business Elite in Baltimore, 1880-1914.
- WILLIAM SKELLY BURFORD, of Missoula, Mont., B. A. Amherst College, 1949; M. A. The Johns Hopkins University, 1955. Aesthetics of Literature.
Simone Weil's *Venise sauvée*.
- DOUGLAS NAPIER CLARK, of Baltimore, Md., B. A. The Johns Hopkins University, 1964. Mathematics.
On the Spectra of Bounded, Hermitian, Hankel Matrices.
- JOHN JOSEPH COFFEY, of Watertown, Mass., A. B. Harvard University, 1961. Biology.
The Inducible Synthesis of Luciferase in a Nitrate-Utilizing Strain of Marine Bacteria.
- AYALA COHEN, of Jerusalem, Israel, B. Sc. The Hebrew University of Jerusalem, 1962. Statistics.
On Random Fields.
- ELISHA COHEN, of Jerusalem, Israel, B. Sc. The Hebrew University of Jerusalem, 1963; M. Sc., 1964. Physics.
Vibronic Transitions of Hexagonal Rare-Earth Trichlorides.
- WILLIAM JAMES COOPER, JR., of Kingstree, S. C., A. B. Princeton University, 1962; M. A. The Johns Hopkins University, 1965. History.
The Conservative Regime in South Carolina, 1877-1890.
- JAMES BEN COURTRIGHT, of Topeka, Kans., B. A. Yale University, 1963. Biology.
Polygenic Control of Aldehyde Oxidase and Xanthine Dehydrogenase in *Drosophila*.
- BRUNO MARIO DAMIANI, of Columbus, Ohio, B. A. The Ohio State University, 1963; M. A., 1964. Romance Languages.
La Lozana andaluza, Introducción, Texto y Notas.
- MARK RICHARD DANIELS, of Vancouver, B. C., Canada, B. of Com. University of British Columbia, 1961. Political Economy.
International Differences in Productive Efficiency.
- NIGEL WARWICK DAW, of Brooklandville, Md., B. A. University of Cambridge, 1956; M. A., 1961. Biophysics.
Color Coded Units in the Goldfish Retina.
- DONALD LEE DENBURG, of Baltimore, Md., B. E. E. The Cooper Union, 1957; M. S. E. The Johns Hopkins University, 1959. Electrical Engineering.
Effect of Hopping Conductivity on the Attenuation of 9 GHz Acoustic Waves in Cadmium Sulphide.
- LESTER ARTHUR DOLAK, of Joliet, Ill., B. A. The Johns Hopkins University, 1963; M. A., 1965. Chemistry.
The N-Nitrocarbammates.
- DARRELL JOSEPH DOYLE, of Allentown, Pa., B. A. Lehigh University, 1961; M. S., 1963. Biology.
Sources of Salivary Gland Secretion in the Larvae of the Dipteran, *Chironomus tentans*.
- ALISTAIR MCKAY DUCKWORTH, of Balmullo, Fife, Scotland, M. A. Edinburgh University, 1958; M. A. The Johns Hopkins University, 1964. English.
The Improvement of the Estate: Self and Inheritance in Jane Austen's Major Fiction.
- STEPHEN SHERMAN EASTER, JR., of Port Republic, Md., B. S. Yale University, 1960. Biophysics.
Excitation and Adaptation in the Goldfish's Retina—A Microelectrode Study.
- JOHN STARK ECK, of West Hempstead, N. Y., B. S. Polytechnic Institute of Brooklyn, 1962. Physics.
The Mossbauer Effect Following Coulomb Excitation of the Even-Even Isotopes of Ytterbium.
- CARL ALBERT ELLIGER, of Baltimore, Md., B. S. University of California, Berkeley, 1962; M. A. The Johns Hopkins University, 1963. Chemistry.
Stereospecific Deamination in the Benzhydryl System and a Stereospecific Amine Synthesis.
- FRANK J. FATA, of Ann Arbor, Mich., B. A. Columbia University, 1961. Romance Languages.
Landino on Dante.
- PETER DAVID FISHER, of Pittsburgh, Pa., B. S. in E. E. University of Pittsburgh, 1963. Electrical Engineering.
Thermo-Electric-Cyclotron-Resonance in Semiconductors.
- ARTHUR MAX FISKIN, of Stockton, Kans., B. S. Kansas State College, 1960. Biophysics.
Nucleoside Specific Coordination of Certain Metal Ion Species.
- DIANE ELVERA DETURO FORTUNA, of Lodi, N. J., A. B. New York University, 1958; M. A. The Johns Hopkins University, 1961. English.
The Labyrinth of Art: Myth and Ritual in James Joyce's *A Portrait of the Artist as a Young Man*.
- TED MORGAN FOSTER, of Baltimore, Md., B. E. E. University of Virginia, 1963. Electrical Engineering.
Interferometric Determination of the Drift Pulse Induced Variations of the Ultrasonic Group Velocity in Cadmium Sulphide.
- ALBERT FREDERICK FUCHS, of Philadelphia, Pa., B. S. in E. E. Drexel Institute of Technology, 1960; M. S. in Medical Instrumentation, 1961. Biomedical Engineering.
A Quantitative Description of Normal Eye Movements in the Monkey.
- ROBERT WINSTON GAMMON, of Arlington, Va., B. A. The Johns Hopkins University, 1961; M. S. in Physics, California Institute of Technology, 1963. Physics.
Brillouin Scattering Experiments in the Ferroelectric Crystal Triglycine Sulfate.
- ERIC LAWRENCE GANS, of New York, N. Y., A. B. Columbia University, 1960; M. A. The Johns Hopkins University, 1961. Romance Languages.
The Discovery of Illustration: Flaubert's Early Works, 1835-1837.

- LINDA SHARON GARRICK, of Hampton, Va., B. A. Goucher College, 1962. Biology.
Studies of Histidine-Requiring Mutants of *Escherichia coli* K12.
- JOHN DONALD GLASER, JR., of Baltimore, Md., B. A. The Johns Hopkins University, 1961. Geology.
Non-marine Cretaceous Sedimentation in the Middle Atlantic Coastal Plain.
- DAVID ARTHUR GOLDBERG, of New York, N. Y., B. Eng. Physics Cornell University, 1958; M. S., 1960. Physics.
Mossbauer Effect Following the Reaction $\text{Fe}^{56}(\text{d,p})\text{Fe}^{57}$ and its Application to Nuclear Polarization Studies.
- HENRY NEIL GOLDSTEIN, of Hampton, Va., A. B. University of North Carolina, 1950; M. A. The Johns Hopkins University, 1953. Political Economy.
Official Intervention in the Forward Exchange Market.
- JOHN ANDREW GORMAN, of Flushing, N. Y., B. A. Manhattan College, 1960; M. A. The Johns Hopkins University, 1961. German.
The Reception of Federico Garcia Lorca in Germany (1927-1966).
- CLARA ERNESTINE GREYER, of Towson, Md., A. B. Goucher College, 1931; M. A. The Johns Hopkins University, 1950. Education.
Factors in the Growth Variations in Public Elementary School Membership in Urban Census Tracts.
- WLADIMIR GULEVICH, of Flushing, N. Y., B. Ch. E. New York University, 1953; M. Sc., 1956. Environmental Engineering Science.
The Role of Diffusion in Biological Waste Treatment.
- STEPHEN JESSE HANDEL, of New York, N. Y., B. S. Ind. Mgt. Massachusetts Institute of Technology, 1962. Psychology.
Classification and Similarity of Multidimensional Stimuli.
- WILLIAM FRANCIS HARTMAN, JR., of Baltimore, Md., B. S. Loyola College, 1962. Mechanics.
The Applicability of the Generalized Parabolic Deformation Law to a Binary Alloy.
- ROLAND KENNETH HAWKES, of Boston, Mass., A. B. Tufts College, 1958; M. A. Boston University, 1960. Social Relations.
A Model of the Spatial Distribution of Urban Residential Area Characteristics.
- EDWARD FRANCIS HAYES, of Endwell, N. Y., B. S. The University of Rochester, 1963; M. A. The Johns Hopkins University, 1965. Chemistry.
Five Studies in Quantum Chemistry.
- JON ROGER HERRIOTT, of Baltimore, Md., A. B. Dartmouth College, 1959. Biophysics.
The Crystal Structure of the Disodium Salt of N-phosphoryl Creatine Hydrate.
- MICHAEL FITZGIBBON HOLT, of Pittsburgh, Pa., A. B. Princeton University, 1962. History.
Forging a Majority: The Formation of the Republican Party in Pittsburgh, Pennsylvania, 1848-1860.
- BARBARA YODER HOWARD, of Baltimore, Md., B. A. Swarthmore College, 1962; M. A. The Johns Hopkins University, 1964. Chemistry.
A Stripping Theory Model for Ion Molecule Reactions.
- GILBERT THOREAU HOWARD, of Towson, Md., B. S. in Ind. Eng. Northwestern University, 1963. Operations Research and Industrial Engineering.
Optimal Dynamic Investment.
- STEPHEN HERBERT HOWELL, of Ames, Iowa, A. B. Grinnell College, 1963. Biology.
Biochemical and Ultrastructural Analysis of the Components of the Photoreduction and Photophosphorylation in Spinach Chloroplasts.
- JOHN STEPHEN HUEBNER, of Wynnwood, Pa., A. B. Princeton University, 1962. Geology.
Stability Relations of Minerals in the System Mn-Si-C-O.
- MICHAEL INBAR, of Ramat-Gan, Israel, B. of Soc. Sc. The Hebrew University, 1962. Social Relations.
The Differential Impact of a Game Simulating a Community Disaster and Its Implications for Games with Simulated Environments.
- JOHN WYCLIFFE ITON, of Montreal, Que., Canada, B. A. McGill University, 1962. Political Economy.
Economic Development and the External Sector (with Reference to Post-War Brazil).
- GERALD SAUL JANOWITZ, of Brooklyn, N. Y., B. S. Polytechnic Institute of Brooklyn, 1963; M. S. E. The Johns Hopkins University, 1965. Mechanics.
On Wakes in Stratified Fluids.
- SHARAD LALLUBHAI JARIWALA, of Bombay, India, B. Ch. E. University of Bombay, 1962. Chemical Engineering.
Thermal Decomposition of Starch to Levoglucosan in a Fluidized Reactor.
- GEORGE CHRISTIAN JERNSTEDT, of Pittsburgh, Pa., B. S. in E. E. Carnegie Institute of Technology, 1963; M. A. The Johns Hopkins University, 1966. Psychology.
Effect of Absolute Amount, Mean Amount, and Pattern of Reinforcement on Acquisition and Extinction.
- JOEL HOWARD KAPLAN, of New York, N. Y., B. S. The City College of New York, 1962. Biology.
Chloroplast ATPase Activation by an Acid-Base Transition.
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ACADEMIC DRESS

THE custom of wearing academic dress stems from the Middle Ages, when scholars were also clerics and wore the costume of their monastic order. The hood was originally a cowl attached to the gown which could be slipped over the head for warmth. The cap, originally round, later became the square mortar-board as we see it today.

Today the cap is the same for all American degrees, although the recipient of a doctoral degree is entitled to wear a gold tassel. The gown varies for the respective degrees. The Bachelor's gown is worn closed and can be distinguished by its long, pointed sleeves. The Master's gown is designed to be open with the arms worn through the slits in the elbows of the sleeves. The Doctor's gown, also worn open, has full, bell-shaped sleeves with three horizontal bars stitched across the upper arm. There is a velvet panel draped around the neck and stitched down the front edges. This velvet trimming may be either black or the same color as the velvet border of the hood.

The hood also varies for the respective degrees. The Bachelor's and Master's hoods are of the same design, pointed at the base. The Bachelor's hood is three feet long; the Master's hood is three and one half feet long. The Doctor's hood is four feet long, of fuller shape and rounded at the base.

The hood is bordered with velvet, the color of which indicates the field of study in which the degree was earned:

Dark blue	Philosophy
Light blue	Education
Orange	Engineering
Gold-yellow	Science
Green	Medicine
Salmon pink	Public Health
Pink	Music
Purple	Laws
White	Arts and Letters

The silk lining of the hood represents the institution which granted the degree. If more than one degree is held, the gown and hood of the higher or highest degree is worn. The linings seen in today's academic procession may include:

BLACK	PURPLE
Black, old gold chevron..... Johns Hopkins	Purple, gold chevron.....Northwestern Purple
	University
BLUE	RED
Light blue, white chevron.....Columbia	Bright red.....Wisconsin
Dark blue.....Yale	Plum, with scarlet.....London
Blue with white chevron.....Duke	Maroon
Dark blue, two orange chevrons..Illinois	Crimson
Light blue, two white chevrons..North Carolina	Carnelian, two white chevrons...Cornell
	Cardinal
	Red, tri-chevron in center.....Heidelberg
GOLD	YELLOW
Old gold, maroon chevron.....Minnesota	Dandelion yellow.....Rochester
Old gold.....Iowa	Maize, azure blue chevron.....Michigan
Gold, blue chevron.....California	Yellow and white.....Sorbonne
Gold	
Virginia	

THE UNIVERSITY ODE

Truth guide our University
And from all error keep her free;
Let Wisdom yield her choicest treasure,
And Freedom reach her fullest measure;
Oh, let her watchword ever be
The truth of God will make you free,
Will make you free!

THE UNIVERSITY MOTTO

Veritas vos liberabit.

The truth shall make you free.

—St. John 8:32

