

# COMMENCEMENT 1967 MICHIGAN STATE UNIVERSITY



# COMMENCEMENT 1967

## Saturday, December 2 University Auditorium, East Lansing

## ACADEMIC COSTUME

The pageantry and color at commencement exercises reveal a record of academic achievement of the various individuals taking part in the exercises. The following brief description is given that the audience might more readily interpret such achievement.

In 1895, the Intercollegiate Commission, a group of leading American educators, met at Columbia University to draft a code which would serve to regulate the design of gowns and hoods indicating the various degrees as well as the colors to indicate the various faculties. This code has been adopted by most of the colleges and universities in America and its use has made identification of scholastic honors an immediate activity.

Three types of gowns are indicated by the code. Those worn by the bachelors are made of black worsted material and have long, pointed sleeves. Those worn by masters may be made either of black silk or black wool and have long, closed sleeves with the arc of a circle near the bottom. The arm goes through a slit, giving the appearance of short sleeves for the master's gown. Doctor's gowns are made of black silk and are faced with velvet. The sleeves are full, round and open with three bars of velvet on each sleeve. The velvet facing of bars on the sleeves may be black or the same color as the binding of the hood.

Hoods are made of material identical with the gown and are lined in the official academic color of the institution conferring the degree. If the institution has more than one color, the chevron is used to introduce the second color. Colored velvet or velveteen binds the hoods and indicates the department or faculty to which the degree pertains.

Historical associations of color have been continued to signify the various faculties. Art and letters can be recognized by the white, taken from the traditional white fur trimming of the Oxford and Cambridge Bachelor of Arts hoods. Red, long traditional of the church, indicates theology. The royal purple of the King's court signifies law. The green of medicinal herbs immediately identifies a medical degree. Philosophy is signified by the color of wisdom and truth, blue. Because through research untold wealth has been released to the world, science is identified by golden yellow. Oxford pink indicates music and russet brown, the color of dress worn by ancient English foresters, indicates forestry.

The color of the velvet of the hood is distinctive of the subject to which the degree pertains. For example, the trimming for the degree of Master of Science in Agriculture should be maize, representing agriculture, rather than golden yellow, representing science.

At Michigan State University, it is customary to identify the bachelors graduating from the different departments of study by tassels of the official department color as established by the Intercollegiate Code.

College of Agriculture
AND NATURAL RESOURCES Maize
Forest Products,
Forestry, PackagingRusset
College of Arts and
LETTERSWhite
Music Pink
Philosophy Navy Blue
College of Business
EconomicsCopper
College of
COMMUNICATION ARTSRoyal Blue
JournalismCrimson
SpeechSilver Gray
College of Education Light Blue
College of EngineeringOrange

Colece of Home Economics
Colege of Human Medicine Green
JAMES MADISON COLLEGE Citron
JUSTIN MORRILL COLLEGEWhite
LYMAN BRIGGS COLLEGE
COLECE OF NATURAL SCIENCE Golden Yellow Nursing
Colege of Social Science
Colece of Veterinary Medicine Dark Gray

# ORDER OF CEREMONIES

#### PROCESSIONAL

CROWN IMPERIAL — Walton Michigan State University Band, Professor Harry Begian, Director

AMERICA — Smith The Band and Audience

#### **INVOCATION**

THE REVEREND ROBERT ANDERSON, Ph.D. Associate Professor of Religion, Michigan State University

#### ADDRESS

ROBBEN W. FLEMING, B.A., LL.B. President-Designate, University of Michigan

#### SPECIAL MUSIC

FESTIVE OVERTURE — Shostakovich

#### CONFERRING OF DEGREES

JOHN A. HANNAH, D.Agr., LL.D., HH.D., L.H.D., D.Sc., Litt.D. President, Michigan State University

#### ALMA MATER — Traynor

M.S.U., we love thy shadows When twilight silence falls, Flushing deep and softly paling O'er ivy-covered halls. Beneath the pines we'll gather To give our faith so true, Sing our love for Alma Mater And thy praises, M.S.U. When from these scenes we wander And twilight shadows fade, Our mem'ry still will linger Where light and shadows played. In the evening oft we'll gather And pledge our faith anew, Sing our love for Alma Mater And thy praises, M.S.U.

(The Band and Audience)

#### BENEDICTION

THE REVEREND DOCTOR ANDERSON

#### RECESSIONAL

UNIVERSITY GRAND MARCH - Goldman

The escorts for the procession are members of Mortar Board, the honor society for senior women, and Alpha Lambda Delta, the honor society for freshman women.

The audience is requested to remain seated while those in the procession are entering and leaving the auditorium.

# BOARD OF TRUSTEES

Michigan State University operates under the jurisdiction of a constitutional body known as the Board of Trustees. The eight elected members serve eight-year terms. Two are elected biennially from the state at large.

The President of the University is appointed by the Board and is by constitutional provision the presiding member of the body.

The Board likewise appoints a Secretary and a Treasurer.

The Board has general supervision of the University and the control and direction of all expenditures of University funds.

THE HONORABLE C. ALLEN HARLAN	Southfield
The Honorable Conner D. Smith	Pinconning
The Honorable Stephen S. Nisbet	Fremont
The Honorable Don Stevens	Okemos
The Honorable Frank Hartman	Flint
THE HONORABLE CLAIR WHITE	Bay City
THE HONORABLE FRANK MERRIMAN	Deckerville
THE HONORABLE KENNETH W. THOMPSON	Birmingham

JOHN A. HANNAH, Ex Officio, President	East Lansing
JACK BRESLIN, Secretary	East Lansing
PHILIP J. MAY, Treasurer	East Lansing

## MICHIGAN STATE UNIVERSITY

Michigan State University, one of the leading land-grant universities and the first agricultural college in America, strives for excellence in affording liberal and practical education for its students in a broad range of human endeavors.

MSU also serves people of the state, nation and world through its numerous research, extension and international programs.

Now in its 113th year, Michigan State has grown from three buildings and six faculty members to one of the ten largest universities in the nation. It has approximately 3,000 staff members engaged in teaching, research and public service, 439 buildings, and approximately 5,000 acres of land of which 2,010 acres are in existing or planned campus development.

Founded in 1855 to educate youth for the major occupation of that day — farming — MSU has broadened its offerings to meet the educational needs of today. Michigan State now has the School for Advanced Graduate Studies and 15 colleges — Agriculture and Natural Resources, Arts and Letters, Business, Communication Arts, Education, Engineering, Home Economics, Human Medicine, James Madison, Justin S. Morrill, Lyman J. Briggs, Natural Science, Social Science, Veterinary Medicine and the University College — which offer basic courses for all freshmen and sophomores. Nearly 200 areas of specialization are available to undergraduates; approximately 300 are offered for graduate students.

The Honors College, which enables superior students to waive normal graduation requirements and undertake individual programs, attracts many of the nation's finest young scholars. The Merit Scholarship Program, of which Michigan State University is a prominent sponsor, enrolled nearly 200 Merit Scholars in this year's freshman class. This figure represents more than seven percent of the nation's total of this unusually select group.

One of the newest of many innovations in higher education made by Michigan State University is its coeducational academic residence halls. Incorporation of classrooms and faculty offices with living, dining and recreational facilities has given these giant new dormitories, now nine in number, a stimulating academic environment. Each of these halls is the center of curricular and noncurricular activities, creating a "college within a college" atmosphere.

The "small college within the larger university" concept was introduced in 1965 at MSU by the establishment of the Justin S. Morrill College, which offers a limited enrollment liberal education program with an international emphasis; an intensive program in foreign languages is required of all Justin Morrill Students. The concept was expanded this year by the establishment and opening of the James Madison College and the Lyman J. Briggs College. James Madison offers a curriculum for the study of public policy problems within the framework of the social sciences and related disciplines. Lyman Briggs makes available a liberal curriculum for students especially interested in science and mathematics.

## MICHIGAN STATE UNIVERSITY (continued)

Today, nearly 39,000 students attend the University at East Lansing. About 80 percent are from Michigan, representing every section of the state. Students also come from every state in the nation and 78 foreign countries.

Looking to the future, Michigan State University is preparing for increasingly larger enrollments as the great number of children born after World War II reach college age. To meet this challenge, MSU is revising curriculums and developing new teaching techniques through its Educational Development Project.

In the land-grant tradition it pioneered, Michigan State University is concerned with research and service as well as teaching.

All colleges and the Agricultural Experiment Station are engaged in a wide range of research. Some 2,100 individual projects are in progress. The University's research tools include the giant Control Data 3600 Computer and a 50-million-volt cyclotron. Modern facilities include the following new buildings: Chemistry, biochemistry, psychology research, veterinary medicine, plant science research, and natural resources.

Through an agreement with the Atomic Energy Commission, MSU will become a national center for basic research on plants and their reactions to radiation. Involved is construction of a \$2 million building, a staff of approximately 90 persons and an annual budget of approximately \$1 million when the program is fully underway.

Benefits of the University are brought to every county in Michigan by the Cooperative Extension Service and the Continuing Education Service. Their programs, on and off campus, provide a wide range of technical information and formal course work for hundreds of thousands of Michigan citizens. The Kellogg Center for Continuing Education, one of the finest conference centers in the nation, annually hosts nearly 50,000 adults who come to the campus for some 600 conferences and other educational meetings.

Michigan State University's land-grant concept of service is international. Supported by grants from the federal government and private foundations, Michigan State University maintains research and technical assistance projects in Asia, Africa and Latin America. International projects have given many faculty members overseas experience, adding a new dimension to their teaching.

With more than a century of educational achievement behind it, Michigan State University continues to apply its academic and physical resources to the problems of today and the challenges of the future.

# HONORARY DEGREE

ROBBEN WRIGHT FLEMING

Your distinguished career as a lawyer, teacher and administrator has earned for you widespread recognition. During your terms of service with the War Labor Board in Washington, and later with the labor and industrial relations centers at the Universities of Wisconsin and Illinois, you gave abundant evidence of your insight and wisdom in the solution of legal and economic problems. Because of your devotion to truth and the best traditions of American legal education, you have met with uncommon success as a scholar and professor of law. As Chancellor of the University of Wisconsin you have demonstrated rare qualities of leadership and a gifted capacity for penetrating study of the social and educational process. Wherever you have been entrusted with responsibility, you have responded with energy and creative vision. Assuredly your new career as President of our sister institution, The University of Michigan, will be marked by the same dedication and success which have characterized all your endeavors. Because of your intellectual integrity, your wide knowledge, and your contributions to American education, Michigan State University confers upon you the degree of Doctor of Laws.

# THE CANDIDATES FOR DEGREES

## 1967 CLASS ROSTER

This includes the names of candidates for degrees as of the close of the 1967 Fall term, as well as the names of recipients of the Doctoral degrees at the close of the 1967 Summer term.

Candidates are listed by School for Advanced Graduate Study and by colleges. The colleges are arranged in the order in which they were established.

MILTON E. MUELDER, DEAN

#### CANDIDATES FOR THE DOCTORAL DEGREES

JAMES F. ALEXANDER, Ph.D.

THOMAS LIONEL BARTON, Ph.D.

JAMES EDWARD BEALER, Ph.D.

JAMES EDWARD BELL, JR., D.B.A.

B.A., Duke University; M.A., California State College. Psychology. Major Professor: Norman Abeles, Associate Professor. Thesis: Perspectives of Psychotherapy Process: Dependency, Interpersonal Relationships, and Sex Differences.

B.S., M.S., University of Arkansas. Poultry Science. Major Professor: Philip J. Schaible, Professor. Thesis: Fatty Liver Studies in Laying Hens.

B.S., M.E.O., Pennsylvania State University. Education. Major Professor: Walter F. Johnson, Professor. Thesis: An Analysis of Personality and Demographic Factors Concerning Students Involved in Disciplinary Problems.

B.S., Marquette University; M.A., Michigan State University. Business Administration (Marketing). Major Professor: Bernard J. La Londe, Associate Professor. Thesis: An Analysis of the Decision Process Utilized by Long Distance Mobile Families in Selecting New Sources of Supply for Goods and Services.

ROBERT SCRANTON BORDEN, Ph.D.

B.S., Mount Union.
Chemistry. Major Professor: Robert L. Hammer, Professor.
Thesis: The TiCl<sub>4</sub> - TiF<sub>4</sub> System

Titanium (IV) Chloride Fluorides
Fluorine-19 NMR Study in Tetrahydrofuran

JAMES ALEXANDER BOXALL, JR., Ph.D.

A.B., Albion College; M.A., Michigan State University. History. Major Professor: Paul A. Varg, Professor. Thesis: Albert Gallatin and American Foreign Policy: A Study in Thought and Action.

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D A Barrow Demonstry Dh D	PA MS University College at Dublin
PATRICK ANTHONY BRENNAN, Ph.D.	B.A., M.S., University College at Dublin. Entomology. Major Professor: Dean L. Haynes, Assistant Professor. Thesis: Effects of Different Types of Radiation on Various Life Stages of Cereal Leaf Beetle, <i>Oulema melanopus</i> (Linnaeus).
Alfred Lennet Britt, Ph.D.	D.V.M., Michigan State University; M.P.H., University of Michigan. Pathology. Major Professor: Glenn L. Waxler, Professor. Thesis: Pathologic Effects of <i>Escherichia Coli</i> 083:K.:NM in Gnoto- viotic Pigs.
DONALD GEORGE BUTCHER, Ed.D.	B.S., Michigan State University; M.S., Eastern Michigan University. Education. Major Professor: Floyd G. Parker, Professor. Thesis: A Study of the Relationship of Student Self-Concept to Aca- demic Achievement in Six High Achieving Elementary Schools.
Anna Salne Brylowski, Ph.D.	A.B., Western Michigan University; M.A., Michigan State University. English. Major Professor: Clyde E. Henson, Professor. Thesis: The House of Irony: A Study of Irony in Henry James.
Donald Bernard Carlson, Ph.D.	B.S., University of Connecticut; M.S., Michigan State University. Horticulture. Major Professor: Stanley K. Ries, Professor. Thesis: The Influence of Simazine on the Quality and Composition of Pome Fruit.
Mark Chasin, Ph.D.	A.B., Cornell University. Biochemistry. Major Professor: William C. Deal, Associate Professor. Thesis: The Isolation and Characterization of a New Class of Lactic Dehydrogenase Inhibitors: Substituted Phenols.
Michael O'Meara Childs, Ph.D.	B.A., St. John's University; M.S., Michigan State University. Zoology. Major Professor: James C. Braddock, Professor. Thesis: Some Observations on the Relative Stimulus Values of Size, Shape and Color With Respect to Nest Building in the Siamese Fight- ing Fish, <i>Betta splendens</i> (Regan).
MIN CHUNC, Ph.D.	M.D., Severance Medical College; M.S., Yonsei University. Microbiology and Public Health. Major Professor: Ronald W. Hinz, Associate Professor. Thesis: Studies of Interrelationships Between Genetically Resistant Chicken Embryo Cells and the Bryan High Titer Strain of Rous Sar- coma Virus.
David Lee Clark, Ph.D.	B.A., Kalamazoo College; M.S., University of Oklahoma. Zoology. Major Professor: Martin Balaban, Associate Professor. Thesis: The Development of Ocular Nystagmus of Vestibular Origin and Effects of Early Rotatory Experience.
George Edward Cole, Ph.D.	B.A., M.A.T., Michigan State University. Education. Major Professor: Max S. Smith, Professor. Thesis: The Objectives of the Justin S. Morrill College as Perceived by Its Members

#### DOCTORAL DEGREES — Continued

B.S., University of London; M.S., Michigan State University. MARGARET JANE COLEMAN, Ph.D. Horticulture. Major Professor: Richard S. Lindstrom, Associate Professor. Thesis: The Market Potential for Graded Pompon Chrysanthemums. B.A., Oberlin College; M.S., Michigan State University. KENNETH DOUGLAS COUTTS, Ph.D. Education. Major Professor: Wayne D. Van Huss, Professor. Thesis: The Effects of Electrical Stress and/or Physical Activity on the Histology of the Heart, Thyroid, Adrenal Medulla in Adult Male Albino Rats. B.S., St. Lawrence University; M.S., Michigan State University. Physics. Major Professor: Egon A. Hiedemann, Professor. ARTHUR JARED CRANDALL, Ph.D. Thesis: Measurement of the Velocity of Sound in Water by Optical Methods. B.A., Albion College. WILSON JOHN DALZELL, JR., Ph.D. Zoology. Major Professor: Richard A. Fennell, Professor. Thesis: A Histochemical Study of the Distributions of Thirteen Enzymes in the Early Chick Blastoderm. GARY FRANK DARDAS, Ph.D. B.S., Central Michigan University; M.S., Michigan State University. Microbiology and Public Health. Major Professor: Virginia H. Mallmann, Assistant Professor. Thesis: Immunologic Responses of Rabbits to Mycobacterium Bovis; Chemical, Electrophoretic and Antigenic Analyses of Bacillary Extracts. B.S., Central Michigan University; M.S., Michigan State University. Microbiology and Public Health. Major Professor: Virginia H. Mall-TERRY JAY DARDAS, Ph.D. man, Assistant Professor. Thesis: Antigenic, Chemical, Chromatographic, and Electrophoretic Analyses of Unheated Culture Filtrates of Mycobacterium Bovis. VICTOR CHARLES DOHERTY, Ph.D. B.S., M.B.A., University of Detroit. Business Administration (Management). Major Professor: Durab B. Unwalla, Associate Professor. Thesis: Emergence of Hospital Personnel Administration: An Exploratory Study of Hospitals in a Large Metropolitan Area. A.B., Ateneo De Manila; M.S., Stanford University; M.B.A., Marquette RENE VENZON ELICANO, Ph.D. University. Business Administration (Management). Major Professor: Richard F. Gonzalez, Professor. Thesis: The Development of a State-Space Model of an Aerospace Enterprise and Its Evaluation as a Practical Management Tool. KENNETH GERALD ELZINGA, Ph.D. B.A., Kalamazoo College; M.A., Michigan State University. Economics. Major Professor: Walter Adams, Professor. Thesis: The Effectiveness of Relief Decrees in Antimerger Cases.

#### DOCTORAL DEGREES - Continued

THOMAS HOWARD ENGLUND, Ph.D.	B.A., Westmont College; M.A., Michigan State University. Education. Major Professor: Richard L. Featherstone, Professor. Thesis: The Selection, Orientation, and In-Service Education of De- partment Chairmen in Selected Schools and Colleges of Education.
Gerald Max Flachs, Ph.D.	B.S., M.S., Michigan State University. Electrical Engineering. Major Professor: J. Sutherland Frame, Pro- fessor. Thesis: Stability and Cut Points of Probabilistic Automata.
Thomas Mason Freeman, Ph.D.	B.S., M.B.A., West Virginia University. Education. Major Professor: Edward B. Blackman, Professor. Thesis: A Multiple Correlation Analysis of the Supplies and Services General Fund Budgets for Selected Academic Departments at Mich- igan State University: 1964-65 and 1965-66.
Alan David Goldberg, Ph.D.	B.A., Yale University; M.A.T., Wesleyan University. Education. Major Professor: Norman Kagan, Professor. Thesis: A Sequential Program for Supervising Counselors Using the Interpersonal Process Recall Technique.
Roy Robert Goughnour, Ph.D.	B.S., M.S., Michigan State University. Civil Engineering. Major Professor: Orlando B. Andersland, Asso- ciate Professor. Thesis: The Soil Ice System and the Shear Strength of Frozen Soils.
JAMES HARLEN GREEN, Ph.D.	B.A., M.A., Michigan State University. Education. Major Professor: John E. Jordan, Associate Professor. Thesis: Attitudes of Special Educators Versus Regular Teachers Toward the Physically Handicapped and Toward Education in Michigan.
DAVID V. GRILLOT, Ph.D.	B.S., M.S., Ohio University. Physics. Major Professor: Hugh McManus, Professor. Thesis: Reaction Matrices for Finite Nuclei.
Gerard Hubert Gubbels, Ph.D.	B.S., M.S., University of British Columbia. Horticulture. Major Professor: Alvin L. Kenworthy, Professor. Thesis: Soil and Atmospheric Influences on Plant Water Balance with Special Reference to Blackheart of Celery ( <i>Apium Graveolens</i> ).
Robert Gifford Harper, Ph.D.	B.S., M.S., West Virginia University. Food Science. Major Professor: Lyman J. Bratzler, Professor. Thesis: Some Chromatographic Studies of the Phenolic Fraction of Hardwood Smoke.
PAUL ROBERT HARRIS, Ph.D.	B.S., Georgia Institute of Technology; M.S., Northwestern University. Chemical Engineering. Major Professor: M. H. Chetrick, Professor. Thesis: A Reaction Source Term Model for Photochemical Reactor Scale-Up.
DELOY G. HENDRICKS, Ph.D.	B.S., University of Idaho. Animal Husbandry, Maior Professor: Elwyn B. Miller Professor

Animal Husbandry. Major Professor: Elwyn R. Miller, Professor. Thesis: Some Factors Affecting Mineral Utilization by the Baby Pig.

William Adam Herzog, Jr., Ph.D.	B.A., Wheaton College; M.A., Indiana University. Communication. Major Professor: Everett M. Rogers, Professor. Thesis: The Effect of Literacy Training on Modernization Variables.
FREDERICK E. HILL, Ph.D.	A.B., Central Michigan University; M.A., Michigan State University. Education. Major Professor: Gregory A. Miller, Associate Professor. Thesis: The Attraction of Upper-Class and Under-Class Vocationally Undecided Male Students Toward a Counseling Relationship.
Lilburn Paul Hoehn, Ph.D.	B.S., M.Ed., University of Missouri; D.A.G., Michigan State University. Education. Major Professor: Charles A. Blackman, Professor. Thesis: The Regional Education Laboratories as Change Agents.
Anne Elizabeth Hughes, Ed.D.	Ph.B., University of Detroit; M.Ed., Wayne State University. Education. Major Professor: Byron H. Van Roekel, Professor. Thesis: An Investigation of Certain Socio-Linguistic Phenomena in the Vocabulary, Pronunciation and Grammar of Disadvantagesd Pre- School Children, Their Parents and Their Teachers in the Detroit Public Schools.
Charles Dennis Ignasias, Ph.D.	A.B., Aquinas College; M.A., Michigan State University. History. Major Professor: Charles C. Cumberland, Professor. Thesis: Reluctant Recognition: The United States and the Recogni- tion of Alvaro Obregón of Mexico, 1920-1924.
Donald Eugene Jabury, Ph.D.	A.B., University of Michigan; M.A., Michigan State University. Education. Major Professor: Gregory A. Miller, Associate Professor. Thesis: Identity Diffusion as a Function of Sex Roles in Adult Women.
John David Jackson, Ph.D.	B.A., Sir George Williams University; M.A., Michigan State University. Sociology. Major Professor: James B. McKee, Professor. Thesis: Toward a Theory of Social Conflict: A Study of French- English Relations in an Ontario Community.
JERRY FREDERICK JANSSEN, Ph.D.	B.S., M.S., Iowa State Teachers College. Chemistry. Major Professor: Harold Hart, Professor. Thesis: Rearrangements Observed During the Trichloromethylation of Some Polysubstituted Benzens.
Lee Warren Johnson, Ph.D.	B.S., M.S., Louisiana State University. Mathematics. Major Professor: David G. Moursund, Associate Pro- fessor. Thesis: Approximation of Vector-Valued Functions.
William Howard Judy, Ph.D.	B.S., West Virginia University; M.S., Michigan State University. Soil Science. Major Professor: John C. Schickluna, Associate Professor. Thesis: Zinc Availability from Soil Applied Zinc Sulfate and Zinc Edta.
FREDRICK CARL KABBE, Ph.D.	B.A., Western Michigan University; M.S., University of Michigan. Chemistry. Major Professor: Robert D. Schuetz, Professor. Thesis: Synthesis and Study of Decomposition Rates of Some Bio Furoyl Peroxides and Some Mixed Peroxides.

#### DOCTORAL DEGREES - Continued SHASHICHAND FATEHCHAND KAPOOR, Ph.D. B.S., M.S., L.L.B., University of Bombay. Mathematics. Major Professor: Patrick H. Doyle, Professor. Thesis: Inverting and Monotone Properties of Complexes. B.A., Brooklyn College; M.A., Michigan State University. NORMAN J. KARL, Ph.D. Psychology. Major Professor: Arthur A. Seagull, Assistant Professor. Thesis: Completed Psychotherapies: A Study of Process and Outcome Using a Time Sampling Technique. HAROLD EUGENE KAUFFMAN, Ph.D. B.A., Goshen College. Botany and Plant Pathology. Major Professor: William J. Hooker, Professor. Thesis: Cytology of Mixed Infections with Potato Viruses X and Y in Nicotiana tabacum Leaves. B.S., M.S., Michigan State University. DONALD BRUCE KECK, Ph.D. Physics. Major Professor: Clarence D. Hause, Professor. Thesis: High Resolution Absorption, Zeeman and Magnetic Rotation Spectra of the Fundamental and Satellite Bands of Nitric Oxide in the Near Infrared. B.A., M.A., Michigan State University. CARL LEE KEEN, Ph.D. English. Major Professor: Sam S. Baskett, Professor. Thesis: The Fictional Writings of Herbert Quick. B.S., Hiram University; M.S., Purdue University. NORMAN EDSEL KELKER, Ph.D. Microbiology and Public Health. Major Professor: David T. Clark, Professor. Thesis: The Utilization of Nucleic Acid Precursors by Malaria Parasites. B.S., M.S., Michigan State University. Animal Husbandry. Major Professor: William T. Magee, Professor. KENNETH EVANS KEMP, Ph.D. Thesis: Evaluation by Genetic Simulation of Changes in a Crossbred Population Resulting from Selection in a Purebred Population. B.S., M.A., Michigan State University. FRANCIS CARL KENEL, Ed.D. Education. Major Professor: William A. Mann, Professor. Thesis: The Effectiveness of the Mann Inventory in Classifying Young Drivers Into Behavioral Categories and Its Relationship to Subsequent Driver Performance. B.S., State University of New York; M.A., Michigan State University. JOHN WILLIAM LAVERY, Ed.D. Education. Major Professor: John E. Jordan, Associate Professor. Thesis: A Study of the Effects of the Federal College Work-Study Program on the Achievement of Freshman College Students of the State University College, Geneseo, New York. B.A., M.A., Wayne State University. Education. Major Professor: Max S. Smith, Professor. WILLIAM ANTHONY LOZANO, Ph.D. Thesis: An Analysis of Graduating and Non-graduating Student Characteristics at Grand Rapids Junior College. MUHAMMAD ANWER SAEED MALIK, Ph.D. B.S., Government Engineering College, Lahore, Pakistan; M.S., University of Minnesota. Agricultural Engineering. Major Professor: James S. Boyd, Associate Professor. Thesis: Hydrodynamic and Heat Transfer Characteristics of a Solar Heated Air Duct.

#### DOCTORAL DEGREES - Continued

F. HEINRICH MARTIN, Ph.D.

D.V.M., National University, Colombia, South America; M.S., Michigan State University.

Animal Husbandry. Major Professor: Duane E. Ullrey, Associate Professor.

Thesis: The Utilization of Vitamin A and Carotene by Ruminants. 1. Vitamin A Potency of Carotenes in Corn Silage Fed to Lambs.

- The Effect of Time and Route of Administration of Vitamin 2. A on Liver Storage by Steers.
- The Effect of Route of Administration of Vitamin A Concen-3. trations in Steers at Subsequent Time Intervals.

B.S., M.S., Montana State University. Crop Science. Major Professor: Carter M. Harrison, Professor. Thesis: A Study of Formation, Elongation, Longevity and Death of Barley Root Hairs.

B.A., Carroll College; M.A.T., Michigan State University. Education. Major Professor: Floyd G. Parker, Professor. Thesis: Administrative Problems Involved in Shared Time Programs in Selected Public and Non-Public Schools with Implications for Implementation.

B.A., St. Mary's College; M.S., Michigan State University. Physics. Major Professor: Michael J. Harrison, Associate Professor. Thesis: The Interaction of Electromagnetic Radiation With a Bounded Plasma.

B.S., Portland State College; M.A., Michigan State University. Economics. Major Professor: John P. Henderson, Professor. Thesis: The Effect of Highway Improvements on Agricultural Production: An Argentine Case Study.

B.S., M.S., Michigan State University. Physiology. Major Professor: E. Paul Reineke, Professor. Thesis: Thyroactive Iodinated Proteins. I. Immunology. II. Thyroid Hormone Analysis.

B.A., M.B.A., Michigan State University. Business Administration (Accounting). Major Professor: Gardner M. Jones, Professor. Thesis: Problems in Accounting for Ownership Transactions in the Close Corporation.

B.S., Miami University; M.A., New York University. Education. Major Professor: Elaine F. Uthe, Assistant Professor. Thesis: An Identification of Certain Similarities and Differences Between Successful and Unsuccessful College Level Beginning Shorthand Students and Transcription Students.

B.S., Arizona State University. Chemistry. Major Professor: Gerasimos John Karabatsos, Professor. Thesis: The Deamination of Isotopically-Labeled Butylamines.

JAMES DOUGLAS MCELGUNN, Ph.D.

FRANCIS LEO MCINNIS, Ph.D.

ANDREW ROSTYSLAW MELNYK, Ph.D.

FREDERICK DOUGLAS MILLER, Ph.D.

TERRENCE WYNN MISCHLER, Ph.D.

JAMES LEE MITCHELL, JR., D.B.A.

LEFTERIE MICHAEL MOSKOVIS, Ph.D.

RAMON A. MOUNT, Ph.D.

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DOCTORAL DEGREES — Continued	DOCTORAL DECIMPS Connect
ROBERT MANSFIELD NUERMBERGER, Ph.D.	B.A., Houghton College; B.D., Westminster Theological Seminary. Education. Major Professor: Buford Stefflre, Professor. Thesis: The Nature of Man and Guilt: Implications for Counseling Derived from an Analysis of the Philosophies of Cornelius Van Til and Erich Fromm.
RAYMOND THOMAS O'DONNELL, Ph.D.	B.S., Loyola College. Chemistry. Major Professor: Andrew Timnick, Professor. Thesis: The Polarographic Behavior of Dysprosium (III) and Sama- rium (III) in Diemethyl Sulfoxide.
Norbert Wilhelm O'Hara, Ph.D.	B.S., M.S., Michigan State University. Geology. Major Professor: William J. Hinze, Professor. Thesis: An Aeromagnetic Survey and Geophysical Interpretation of the Precambrian Framework and Tectonic Structure of the Eastern Lake Superior Region.
DUPE OLATUNBOSUN, Ph.D.	B.Sc., University of Ibadan. Agricultural Economics. Major Professor: Glenn L. Johnson, Professor. Thesis: Nigerian Farm Settlements and School Leavers' Farms – Profitability, Resource Use and Social-Psychological Considerations.
DAVID LAWRENCE OLSSON, Ph.D.	B.S., M.S., Michigan State University. Forest Products. Major Professor: Harold J. Raphael, Professor. Thesis: The Possible Impact of New Packaging System Concepts on Traditional Corrugated Box Markets.
Lawrence Mural Ozzello, Ph.D.	B.S., Northern Michigan University; M.A., University of Michigan. Education. Major Professor: Peter G. Haines, Professor. Thesis: An Analysis of Accounting Type Activities Performed by Tech- nical Accountants in Firms Manufacturing Durable Goods with Impli- cations for Evaluation of a Post-High School Terminal Accounting Program.
Max James Paape, Ph.D.	B.S., M.S., Michigan State University. Dairy. Major Professor: H. Allen Tucker, Assistant Professor. Thesis: Influence of Pregnancy and Dry Period on Lactation in the Rat.
Paul Allan Pacter, Ph.D.	B.S., Syracuse University. Business Administration (Accounting). Major Professor: Gardner M. Jones, Professor. Thesis: A Program for Improvement of Information Systems at Small, Private, Predominantly Negro Colleges.
Keith E. Palmerton, Ph.D.	B.A., Albion College; B.D., Perkins School of Theology. Education. Major Professor: John E. Jordan, Associate Professor. Thesis: A Study of the Nature and Determinants of Attitudes of Col- lege Counselors Toward Physically Disabled Persons.
William Hamilton Parks, Ph.D.	B.A., M.A., Michigan State University. Business Administration (Finance). Major Professor: Myles S. Delano, Professor. Thesis: An Inventory Cost-Pricing Model of the Firm.

Roger Pennock, Jr., Ph.D.	B.S., Earlham College; M.S., Cornell University. Soil Science. Major Professor: Eugene P. Whiteside, Professor. Thesis: Communication of Soil Survey and Related Soil Management Information.
Shian-Koong Perng, Ph.D.	B.S., Taiwan University; M.S., Virginia Polytechnic Institute. Statistics. Major Professor: Martin Fox, Associate Professor. Thesis: Inadmissibility of Various "Good" Statistical Procedures Which are Translation Invariant.
THEODORE JAMES PETERS, Ph.D.	B.S., Western Michigan University; M.A., Michigan State University. Audiology and Speech Science. Major Professor: Herbert J. Oyer, Professor. Thesis: Oral Language Skills of Children Who Stutter.
PAUL ELMER PETERSEN, Ph.D.	B.S., Iowa State University; M.S., University of Iowa. Physics. Major Professor: Truman O. Woodruff, Professor. Thesis: Theoretical Investigation of the Conduction Band Carrier Density in InSb under Carrier Multiplication Conditions.
THOMAS PAUL PIETRAS, Ph.D.	B.A., St. Mary's College; M.A., Michigan State University. Education. Major Professor: Elizabeth Rusk, Professor. Thesis: The Attitudes of Prospective Secondary English Teachers To- ward Certain Issues and Ideas Concerning English as a High School Subject.
LEONARD MAXWELL PIKE, Ph.D.	B.S., M.S., University of Arkansas. Horticulture. Major Professor: Clinton E. Peterson, Professor. Thesis: The Inheritance and Related Studies of the Parthenocarpic Character in Cucumber, <i>Cucumis Sativus</i> L.
Jean Tansey Porter, Ph.D.	B.A., Antioch College; M.A., Michigan State University. Education. Major Professor: Jean M. LePere, Professor. Thesis: An Evaluation of the Head Start Program in Calhoun County, Michigan, Summer, 1965, With Particular Attention to School Readi- ness.
Kenneth Ray Raessler, Ph.D.	B.S., West Chester State Teachers College; M.Ed., Temple University. Music. Major Professor: William R. Sur, Professor. Thesis: A Comparative Study of Music Course Requirements and Professional Laboratory Experiences of Undergraduate Programs in Music Education in Selected Colleges and Universities in Pennsylvania, Maryland and New Jersey.
Dorothy Elizabeth Ann Ramsland, Ph.D.	B.S., University of Wisconsin; M.S., Michigan State University. Home Management. Major Professor: Jean D. Schlater, Associate Pro- fessor. Thesis: Values Underlying Family Utilization of Home Furnishings.
Peggy Ann Ramstad, Ph.D.	B.M.E., B.M., M.M.E., Minneapolis College of Music. Education. Major Professor: Byron H. Van Roekel, Professor. Thesis: A Linguistic Theory of Reading.

WILLIAM EUGENE RICE, Ed.D.	B.A., M.A., Michigan State University. Education. Major Professor: Gregory A. Miller, Associate Professor. Thesis: A Study of the Effects of a Specific Educational Therapy on Language Development, Visual Perception Development, Intellectual Functioning and Academic Ability of Children Classified as Educable Mentally Retarded.
VICTOR J. RICH, Ed.D.	B.S., B.A., Illinois State Normal University. Education. Major Professor: Calhoun C. Collier, Professor. Thesis: The Evolving Student Teaching Program at Western Illinois University and an Assessment of the Quad-Cities Resident Student Teaching Center.
KARE RINGLUND, Ph.D.	B.S., M.S., Agricultural College of Norway. Crop Science. Major Professor: Everett H. Everson, Professor. Thesis: Leaf Pubescence in Common Wheat, <i>Triticum Aestivum</i> L., and Resistance to the Cereal Leaf Beetle, <i>Oulema Melanopus</i> (L.).
Albert Henry Ritseman, Ed.D.	B.A., Calvin College; M.A., University of Michigan. Education. Major Professor: James W. Costar, Professor. Thesis: Characteristics of Disadvantaged Volunteers and Non-Volun- teers for a Federal Youth Work Training Program.
Alvin Lee Rogers, Ph.D.	B.S., Southeastern State College. Botany and Plant Pathology. Major Professor: Everett S. Beneke, Pro- fessor. Thesis: A Study of the Relationships of Selected Dermatophytes Using Subcellular Fractions as Antigens in Immunodiffusion Techniques.
ERNEST EUGENE ROGERS, Ph.D.	B.A., Union College; M.A., Andrews University. Speech and Theatre. Major Professor: Kenneth G. Hance, Professor. Thesis: A Study of the Evangelistic Methodology and Preaching of Edward Earl Cleveland.
Vijay Kumar Rohatci, Ph.D.	M.Sec., Ramjas; B.Sc., M.A., Delhi University; M.Sc., University of Alberta. Statistics. Major Professor: Esther Seiden, Professor. Thesis: Some Results on Convergence Rates and Asymptotic Behavior for the Laws of Large Numbers.
RICHARD WALKER RUNDELL, Ph.D.	B.S., University of Wisconsin; M.S., University of Minnesota. Dairy. Major Professor: John A. Speicher, Assistant Professor. Thesis: Optimum Dairy Cow Replacement Policies to Maximize In- come Over Feed Cost.
Joan Huber Rytina, Ph.D.	B.A., Pennsylvania State University; M.A., Western Michigan University. Sociology. Major Professor: William H. Form, Professor. Thesis: The Ideology of American Stratification.

#### DOCTORAL DEGREES - Continued

RICHARD HENRY SCHLOSBERG, Ph.D.	B.S., Queens College. Chemistry. Major Professor: Harold Hart, Professor. Thesis: The Acylation of Cyclopropanes.
KENTON TERRY SCHURR, Ed.D.	M.A., Ball State University. Education. Major Professor: Wilbur B. Brookover, Professor. Thesis: The Effect of Special Class Placement on the Self-Concept-of- Ability of the Educable Mentally Retarded Child: Part II.
RADOM SETTEETON, Ph.D.	B.S., Kasetsart University; M.A., Thammasat University. Sociology. Major Professor: J. Allen Beegle, Professor. Thesis: The Problem of Population Growth in Thailand: With Em- phasis on Food Production and Family Planning.
IONE GENEVIEVE SHADDUCK, Ph.D.	B.S., University of Wisconsin; M.A., Michigan State University. Education. Major Professor: Janet A. Wessel, Professor. Thesis: A Philosophical Base for a Physical Education Program Design.
Bhupendra Umedchand Shah, Ph.D.	B.S., B.V., Mahavidyalaya; M.S., Michigan State University. Metallurgy. Major Professor: Chuan T. Wei, Professor. Thesis: Fracture in Zinc Crystals.
James Carey Miller Shute, Ph.D.	B.A., Queen's University. Education. Major Professor: Carl H. Gross, Professor. Thesis: A Study of International Activity in Canadian Universities.
Yagya Nand Sinha, Ph.D.	B.V., Bihar Veterinary College; M.S., Michigan State University. Dairy. Major Professor: H. Allen Tucker, Assistant Professor. Thesis: Endocrine, Reproductive and Mammary Development of Heifers and Rats During the Estrous Cycle.
M. Joseph Smucker, Ph.D.	A.B., Bluffton College; M.A., Michigan State University. Sociology. Major Professor: William A. Faunce, Professor. Thesis: The Impact of Community Status Systems Upon Personal Ap- praisals of Life Conditions.
James Glenn Snell, Ph.D.	B.S., University of Missouri; M.S., Michigan State University. Agricultural Economics. Major Professor: Harold M. Riley, Professor. Thesis: A Comparative Cost Analysis of Alternative Marketing Sys- tems for Slaughter Hogs in Michigan.
George Carl Sonnichsen, Ph.D.	B.S., DePauw University. Chemistry. Major Professor: Gerasimos John Karabatsos, Professor. Thesis: Relative Contributions of Hyperconjugation and Nonbonded Interactions to Secondary Isotope Effects.
Donald Lewis Stormer, Ed.D.	B.S., M.A., Michigan State University. Education. Major Professor: H. Paul Sweany, Professor. Thesis: Vocational Maturity: Description, Specifications and Corre- lates in Ninth Grade Youth.

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Gladys I. Strahl, Ph.D.	B.A., M.A., Michigan State University. Education. Major Professor: Norman Kagan, Professor. Thesis: The Relationship of Centrality of Occupational Choice to Sex, Parental Identification, and Socioeconomic Level in University Under- graduate Students.
Robert Dale Taylor, Ph.D.	B.A., Western Michigan University; M.A., University of Michigan. Education. Major Professor: Charles A. Blackman, Professor. Thesis: Structure of a Discipline: An Examination of the Concept and its Implication for K-12 Curriculum Planning.
Stanley Hanford Taylor, Ph.D.	B.A., M.A., Michigan State University. Speech. Major Professor: Kenneth G. Hance, Professor. Thesis: Committees and the Group Process: An Exploratory Cross- National Study.
Arthur Harding Thomas, Ph.D.	B.A., Carleton College; B.S., M.A., University of Minnesota. Education. Major Professor: Norman R. Stewart, Associate Professor. Thesis: Counselor Response to Divergent Vocational Goals of a Fe- male Client in Terms of Acceptance, Appropriateness, and Need for Further Counseling.
Francis Harold Tokay, Ph.D.	B.S., St. Cloud State University; M.A., Michigan State University. Audiology and Speech Science. Major Professor: Edward J. Hardick, Associate Professor. Thesis: Validity and Reliability of Békésy Audiometry with Preschool Age Children.
John Harris Trimm, Ph.D.	B.A., M.A., Michigan State University. Business Administration (Management). Major Professor: W. Lloyd Warner, Professor. Thesis: A Socio-Structural Analysis of Selected Federal Regulatory Agencies Affecting Business Management.
Jack Ronald Van Der Slik, Ph.D.	A.B., Calvin College; A.M., Western Michigan University; M.A., Michi- gan State University. Political Science. Major Professor: Charles Press, Professor. Thesis: Constituencies in Roll Call Voting: An Analysis of the House of Representatives for the 88th Congress.
John Morrison Van Deventer, Ph.D.	B.S., M.A., Bradley University. Psychology. Major Professor: Stanley C. Ratner, Professor. Thesis: Responses to Repeated Tactile Stimulation in the Planarian: Dugesia Tigrina.
John Bos Van Zytveld, Ph.D.	A.B., Calvin College; M.S., Michigan State University. Physics. Major Professor: Jack Bass, Assistant Professor. Thesis: The Effects of Sample Size, Magnetic Field and Temperature on the Electrical Resistivity and Thermopower of Aluminum.
MERVIN C. VINCENT, Ph.D.	B.S., M.S., Michigan State University. Electrical Engineering. Major Professor: Kun Mu Chen, Professor. Thesis: Experimental Investigation of the Modification of the Back- scattering Cross Sections of Metallic Objects.

DOCTORAL DEGREES — Continued		
William James White, Ph.D.	B.S.A., Ontario Agriculture College; M.A., Michigan State University. Communication. Major Professor: Everett M. Rogers, Professor. Thesis: Toward the Validation of a Functional Model of the Adoption- Rejection Process.	
Gordon Carl Whiting, Ph.D.	B.A., University of Minnesota; M.A., University of Utah. Communication. Major Professor: Hideya Kumata, Professor. Thesis: Empathy, Mass Media, and Modernization: A Study in Rural Brazil.	
Roy Albert Williams, Ph.D.	B.S., M.S., Drexel Institute of Technology. Mechanics. Major Professor: Lawrence E. Malvern, Professor. Thesis: Harmonic Dispersion Analysis of Incremental Waves in Uni- axially Prestressed Plastic and Visco-plastic Bars, Plates and Un- bounded Media.	
KEITH WILSON, Ph.D.	B.A., M.A., University of Sheffield; B.Ed., M.Ed., University of Mani- toba. Education. Major Professor: Carl H. Gross, Professor. Thesis: The Development of Education in Manitoba.	
Stuart H. Winston, Ph.D.	B.S., Brooklyn College; M.S., Long Island University. Microbiology and Public Health. Major Professor: Donald W. Twohy, Assistant Professor. Thesis: Studies on the Glucose Metabolism of Tritrichomonas Augusta.	
HEBER G. WOLSEY, Ph.D.	B.A., Brigham Young University; M.A., Northwestern University. Speech and Theatre. Major Professor: Kenneth G. Hance, Professor. Thesis: The History of Radio Station KSL From 1922 to Television.	
William Wayne Wunder, Ph.D.	B.S., Iowa State University; M.S., Michigan State University. Dairy. Major Professor: Lon D. McGilliard, Professor. Thesis: Seasons of Calving — Age, Management, and Genetic Differ- ences for Milk.	
Dharam P. Yadav, Ph.D.	B.S., St. Stephen's College; M.A., Delhi University. Communication. Major Professor: Everett M. Rogers, Professor. Thesis: A Comparative Analysis of Communication Structure and In- novation Diffusion in Two Indian Villages.	
Ren Homer Yeh, Ph.D.	M.S., National Taiwan University. Biochemistry. Major Professor: Harold M. Sell, Professor. Thesis: The Oxidation of Indole-3-Acetaldehyde and Its 1-Methyl De- rivative by Horseradish Peroxidase.	
Robert Hayward Young, Ph.D.	B.S., M.S., Mount Allison University. Chemistry. Major Professor: Harold Hart, Professor. Thesis: The Photoisomerization and Photo-Oxidation of Some Substi- tuted Dienones.	
Young Mok Yun, Ph.D.	B.S., Washington State University; B.S., Oregon State University; M.S., Michigan State University. Entomology. Major Professor: Richard V. Connin, Assistant Professor. Thesis: Effects of Some Physical and Biological Factors On the Re- production, Development, Survival, and Behavior of the Cereal Leaf Beetle, <i>Oulema melanopus</i> (Linnaeus), Under Laboratory Conditions.	

#### DIPLOMA FOR ADVANCED GRADUATE STUDIES

Cornelius Peter Hegewald, D.A.G.	A.B., Calvin College; M.A., Michigan State University. German, Language and Literature. Major Professor: George W. Radi- mersky, Professor.
Guenter G. Pfister, D.A.G.	B.S., Bowling Green State University; M.A., Michigan State University. German, Language and Literature. Major Professor: Stuart Gallacher, Professor.
Joseph A. Therrien, D.A.G.	B.A., M.A., Michigan State University. French, Language and Literature. Major Professor: Charles D. Blend, Professor.
EDUCATIONAL SPECIALIST DEC	REE
Charles Ernest Beyette, Ed.S.	A.B., M.A., Michigan State University. Education. Major Professor: John Suehr, Professor.
Vera Gierman, Ed.S.	B.S., Central Michigan University; M.A., Michigan State University. Education. Major Professor: Herbert C. Rudman, Professor.
Burton Halpern, Ed.S.	B.S., Wayne State University; M.A., University of Michigan. Education. Major Professor: Herbert C. Rudman, Professor.
Clarence Elijah Hodges, Ed.S.	A.B., M.A., University of Notre Dame. Education. Major Professor: Fred J. Vescolani, Professor.
James Edward Meulendyke, Ed.S.	B.S., Northwestern University; M.A., University of Michigan. Education. Major Professor: James E. Heald, Associate Professor.
WARREN L. SPURLIN, Ed.S.	B.Ed., University of Miami; M.A., University of Michigan. Education. Major Professor: Fred J. Vescolani, Professor.
HAZEN GEORGE ZIEGLER, Ed.S.	A.B., Wayne University. Education. Major Professor: John H. Suehr, Associate Professor.
Graduated as of September 1, 1967	
DOCTORAL DEGREES	
Thamby Ninan Adangapuram, Ph.D.	B.S., University of Madras; M.S., Aligarh University. Botany and Plant Pathology. Major Professor: G. Bernard Wilson, Professor. Thesis: Induction of Chromosome Damage by Ethylenimines and Re- lated Compounds.
BURTON L. ALPERSON, Ph.D.	B.A., Baldwin-Wallace College; M.A., Michigan State University. Psychology. Major Professor: Paul Bakan, Professor. Thesis: The Effect of Semantic Relatedness and Practice on the Color- Word Test.

DOCTORAL DEGREES — Continue	d
Igolima Tubobelum Amachree, Ph.D.	B.A., University College of Sierra Leone; M.A., Michigan State University. Sociology. Major Professor: William H. Form, Professor. Thesis: Reference Group and Worker Satisfaction: Case Studies of Worker Satisfaction Among Nigerian Factory Workers.
Robert James Anderson, Ph.D.	B.S., University of Illinois. Chemistry. Major Professor: Jack B. Kinsinger, Professor. Thesis: The Depolarization of Rayleigh Scattered Light.
FERRIS FRANCIS ANTHONY, Ph.D.	B.S., Kent State University. Education. Major Professor: Edward B. Blackman, Professor. Thesis: A Study of the Concept of Image and of Its Application to Organizational Analysis.
Gbolahan Alaba Ashiru, Ph.D.	B.S., Ibadan University; M.S., Michigan State University. Horticulture. Major Professor: Robert F. Carlson, Professor. Thesis: Physiological Studies of Rooting Cuttings of Malling-Merton 106 (MM 106) and East Malling 11 (EM 11) Apple (Malus Sylvestris Mill.) Clones.
Richard John Aulerich, Ph.D.	B.S., M.S., Michigan State University. Poultry Science. Major Professor: Philip J. Schaible, Professor. Thesis: Studies on Urinary Incontinence and "Wet Belly" in Ranch Mink ( <i>Mustela Vison</i> ).
William Jay Bailey, Ed.D.	B.S., M.A., University of Michigan. Education. Major Professor: John H. Suehr, Associate Professor. Thesis: Student Perceived Behavioral Changes Occurring in a Sec- ondary School Faculty as a Result of a Human Relations In-Service Workshop.
Kenneth LeRoy Bauge, Ph.D.	B.S., M.S., Iowa State University. Economics. Major Professor: Harry G. Brainard, Professor. Thesis: Voluntary Export Restriction as a Foreign Commercial Policy with Special Reference to Japanese Cotton Textiles.
CARL ANTHONY BAUMGARDNER, Ph.D.	B.S., University of Detroit; M.S., Michigan State University. Physics. Major Professor: Truman O. Woodruff, Professor. Thesis: Theory of an Electric-Current-Flow Induced Polarization Ef- fect on the Optical Absorption of a Semiconductor.
LAURENT BELANGER, Ph.D.	B.A., Classical College; B.S.S., M.A., Laval University. Business Administration (Management). Major Professor: W. Lloyd Warner, Professor. Thesis: Occupational Mobility of French and English-Canadian Busi- ness Leaders in the Province of Quebec.
Maxwell Alexander Bempong, Ph.D.	B.S., Lincoln University; M.S., Tennessee State University. Horticulture. Major Professor: Kenneth C. Sink, Assistant Professor. Thesis: Karyomorphological and Cytological Investigations of Poin- settia, <i>Euphorbia Pulcherrima</i> Willd. Ex Klotzsch.

ARTHUR LEE BERKEY, Ph.D.	B.S., M.A., Michigan State University. Education. Major Professor: Raymond M. Clark, Professor. Thesis: The Importance of Activities Performed in Functions of the Farm Machinery Industry as a Basis for Training Programs.
GEORGE JURIS BERZINS, Ph.D.	B.S., Michigan State University. Physics. Major Professor: William H. Kelly, Professor. Thesis: High Resolution Gamma-Ray Spectral Studies of the Decays of <sup>117</sup> Te, <sup>119g</sup> Te, <sup>119m</sup> Te, <sup>129g</sup> Te and <sup>129m</sup> Te.
WILLIAM CLAUDE BLAMER, Ed.D.	B.S., Central Michigan University; M.S., University of Michigan. Education. Major Professor: Randolph W. Webster, Professor. Thesis: A Study of Physical Education in the Public Junior and Com- munity Colleges of the Continental United States.
Alfred John Boals, Ph.D.	B.S., Western Michigan University; M.S., Michigan State University. Mathematics. Major Professor: Kyung W. Kwun, Professor. Thesis: Non-Manifold Factors of Euclidean Spaces.
James H. Brown, Ph.D.	B.S.F., West Virginia University; M.F., Yale University. Forestry. Major Professor: Jonathan W. Wright, Professor. Thesis: Patterns of Variation in Root Systems of Scotch Pine Prov- enances.
ROBERT CHARLES BROWN, Ph.D.	B.S., M.S., Oregon State University. Geography. Major Professor: Donald A. Blome, Assistant Professor. Thesis: Spatial Variation of Idle Land in Tulsa, Oklahoma.
KATHARINE GORRELL BUTLER, Ph.D.	B.A., M.A., Western Michigan University. Speech. Major Professor: Herbert J. Oyer, Professor. Thesis: Psychogenic Articulation Disorders Related to Verbal Skills and Intelligence as Measured by the Wechsler Intelligence Scale for Children.
James Henry Campbell, Ph.D.	B.A., Miami University. Communication. Major Professor: Erwin P. Bettinghaus, Associate Professor. Thesis: A Message System Analysis: Variable Subsystems in Cartoon Humor.
Robert Joseph Campbell, Ph.D.	B.S., General Beadle State, M.Ed., South Dakota State. Education. Major Professor: Norman I. Kagan, Professor. Thesis: The Development and Validation of a Multiple-Choice Scale to Measure Affective Sensitivity (Empathy).
Joseph Anthony Caruso, Ph.D.	B.A., Eastern Michigan; M.S., Wayne State University. Chemistry. Major Professor: Alexander I. Popov, Professor. Thesis: Acid-Base Equilibria in Nonaqueous Solvents. Part I: 1,1,3,3- Tetramethylguanidine. Part II: Adiponitrile.
Glenn Albert Chaffee, Ph.D.	B.S., California Institute of Technology; M.A., Pasadena College; M.A., San Francisco State College. Education. Major Professor: Buford Stefflre, Professor. Thesis: A Study of Self-Concepts, Occupational Personas, and Occupa- tional Stereotypes of Engineering Students.

MICHAEL CHUBB, Ph.D.	B.S., University of Toronto; M.S., Michigan State University. Geography. Major Professor: Lawrence M. Sommers, Professor. Thesis: A Systems Analysis and Spatial Demand Approach to State- wide Recreation Planning: A Case Study of Boating in Michigan.
GARY A. CREVASSE, Ph.D.	B.S., M.S., University of Florida. Food Science. Major Professor: Albert M. Pearson, Professor. Thesis: Enzymatic Hydrolysis of Calf Skin and Pig Skin Tropocollagen.
William Louis Daniel, Ph.D.	B.S., Michigan State University. Zoology. Major Professor: James V. Higgins, Associate Professor. Thesis: A Biochemical and Genetic Analysis of the Brachmann-De Lange Syndrome.
Robert Ralph Davis, Jr., Ph.D.	B.A., M.A., Kent State University. History. Major Professor: Gilman Ostrander, Professor. Thesis: Manners and Diplomacy: A History of American Diplomatic Etiquette and Protocol During the Early National Period.
Ralph W. Dent, Ph.D.	B.A., M.A., University of Toronto. Communication. Major Professor: David K. Berlo, Professor. Thesis: The Relation of Dogmatism to Generalization Effects Within and Between Dimensions of Source Credibility.
KENNETH WALTER DOMIER, Ph.D.	B.S., M.S., University of Saskatchewan. Agricultural Engineering. Major Professor: Sverker P. Persson, Asso- ciate Professor. Thesis: Traction Characteristics of Tractors on Agricultural Soils.
William Burle Draper, Ph.D.	B.A., M.A., Michigan State University. Education. Major Professor: Floyd G. Parker, Professor. Thesis: A Survey of Federal Legislative Influence on Public School District Adult Education in Michigan.
Dale Thomas Duff, Ph.D.	B.S., M.S., Ohio State University. Crop Science. Major Professor: James B. Beard, Associate Professor. Thesis: Some Effects of Suparoptimal Temperatures Upon Creeping Bentgrass (Agrostis Palustris Huds.).
Gary Earl Duke, Ph.D.	B.A., Knox College; M.S., Michigan State University. Fisheries and Wildlife. Major Professor: George A. Petrides, Professor. Thesis: Chromium-51 in Metabolizability and Food Passage Rate Studies with the Ring-Necked Pheasant.
E. Larry Eberlein, Ph.D.	B.S., University of Wisconsin; L.L.B., University of Wisconsin Law School. Education. Major Professor: John E. Jordan, Associate Professor. Thesis: The Relationship Between School Climate and Edwards' Mani- fest Needs of the Elementary School Teacher.
George Ensworth, Jr., Ph.D.	B.A., Michigan State University; B.D., Fuller Theological Seminary; M.A., Michigan State University. Education. Major Professor: William A. Mann, Professor. Thesis: The Comparative Effect of Theological Belief and Intolerance on the Responses of First-Year Seminary Students in a Quasi-Interview Situation with Parishioners.

PONTRY CLERAND FUTUEDTON Ph D	B.S., M.S., Southern Illinois University.
ROBERT CLELAND ETHERTON, Ph.D.	Physics. Major Professor: William H. Kelly, Professor. Thesis: Conversion Electron and $\gamma$ -Ray Experiments with the Decay of Bromine-82 and Strontium-83.
PAUL FEDEROFF, Ed.D.	B.S., M.Ed., Ed.S., Wayne State University. Education. Major Professor: William V. Hicks, Professor. Thesis: A Comparison of Occupational and Educational Aspirations and Expectations of Sixth Grade and Twelfth Grade Students.
Edward Trevor Ferguson, Jr., Ph.D.	B.S., M.S., New York State Teachers College. Education. Major Professor: Peter G. Haines, Professor. Thesis: A Comparison of the Effectiveness of the Project and Coopera- tive Methods of Instruction on Selected Competencies in Distributive Education at the Secondary Level.
Robert Leland Fleming, Jr., Ph.D.	B.A., Albion College; M.S., Michigan State University. Zoology. Major Professor: George J. Wallace, Professor. Thesis: The Birds of Mussoorie, U. P., India — A Distributional and Ecological Study.
Cecilia Alejandro Florencio, Ph.D.	B.S., University of Philippines, M.S., University of Iowa. Nutrition. Major Professor: Victor E. Smith, Professor. Thesis: The Efficiency of Food Expenditure Among Certain Working- Class Families in Colombia.
Frieda Lillian Foote, Ph.D.	B.S., Evangel College; M.S., Michigan State University. Sociology. Major Professor: James B. McKee, Professor. Thesis: Role Stress and Cultural Resources: A Study of the Role of the Woman Member of Congress.
Robert Louis Franklin, Ph.D.	B.A., Westmar College. Biochemistry. Major Professor: Harold M. Sell, Professor. Thesis: Synthesis and Physiological Activity of Several 1-Substituted Indole-3-Acetic Acids and Esters.
Donald John Freeman, Ph.D.	B.A., Grinnell College; M.A., Michigan State University. Education. Major Professor: Clessen J. Martin, Associate Professor. Thesis: An Exploratory Study of the Derivation and Retention of Higher-Order Coding Schemes During the Formation of Verbal Associations.
JAMES LESLIE FRY, Ph.D.	B.S., Bowling Green State University. Chemistry. Major Professor: Gerasimos J. Karabatsos, Professor. Thesis: Carbonium Ion Rearrangements in the Propyl System.
LAWRENCE LEE GARBER, Ph.D.	B.A., Goshen College. Chemistry. Major professor: Carl H. Brubaker, Jr., Professor. Thesis: A Vibrational Analysis of Sodium Tetrazolate: Tetrazole Com- plexes of Nickel (II) and Copper (II).
George Gaylin Garver, Ed.D.	B.A., Iowa State Teachers College; A.M., University of Michigan. Education. Major Professor: Donald J. Leu, Professor. Thesis: A Study of the Relationship Between Selected Variables and the Attitudes of Public School Principals in Oakland County, Michigan, Concerning Collective Bargaining for Public School Teachers.

Charles William Gee, Ph.D.	B.S., University of Wisconsin; M.S., Oklahoma State University. Education. Major Professor: John M. Mason, Professor. Thesis: The Influence of Selected Nonintellectual Factors on Academic Achievement in a Beginning Course in Biological Science.
FREDERICK PIERCE GEYER, Ph.D.	B.S., M.S., Purdue University. Agricultural Engineering. Major Professor: Carl W. Hall, Professor. Thesis: Some Stochastic Models for Microorganism Death Kinetics.
John Theodore Goeldi, Ph.D.	B.A., St. Joseph College; M.A., Michigan State University. Education: Major Professor: Horton C. Southworth, Associate Professor. Thesis: A Study Contributing to the Professionalization of the Role of Intern Consultant.
Nelson Henry Goud, Ph.D.	B.A., M.A., Michigan State University. Education: Major Professor: Max R. Raines, Professor. Thesis: A Social Systems Analysis of Junior College Student Personnel Programs.
Horace Franklin Griffitts, Ph.D.	B.S.C., Texas Christian; M.Ed., Texas Technological College. Education. Major Professor: Helen H. Green, Professor. Thesis: A Study Defining Eight Objectives of Business Programs in Public Community Colleges and Determining the Importance of These Objectives.
Herbert Harlan Hadley, Ph.D.	B.S., The Ohio State University; M.S., Michigan State University. Agricultural Economics. Major Professor: Dale E. Hathaway, Professor. Thesis: A Comparison of the Attitudes of the Michigan Cooperative Extension Staff Toward Marketing, Agricultural Policy, and Farm Organization.
Theodore Edward Hagadone, Ed.D.	B.A., Albion College; M.A., Western Michigan University. Education. Major Professor: James E. Heald, Associate Professor. Thesis: A Study of Teacher Personal and Professional Attitudes as They Relate to Student Self-Concepts and Attitudes Toward School in the Six Highest Achieving Schools in Flint, Michigan.
Lola Marie Haller, Ed.D.	B.D., M.A., Western Michigan University. Education. Major Professor: Walter F. Johnson, Professor. Thesis: The Future Role of the Highest Ranking Woman Student Per- sonnel Administrator in the College or University and a Suggested Training Program.
Damian Francis Hannan, Ph.D.	B. Agr. Sci., M.S., Dublin University; M.A., Michigan State University. Sociology. Major Professor: J. Allan Beegle, Professor. Thesis: Factors Involved in the Migration Decisions of Irish Rural Youth.
Richard Roland Harwood, Ph.D.	B.S., Cornell University; M.S., Michigan State University. Horticulture. Major Professor: Deran Markarian, Associate Professor. Thesis: Inheritance of Resistance to Powdery Mildew in <i>Cucumis Melo</i> .

Kenneth Edward Hastings, Ph.D.	B.S., Newark College of Engineering; M.S., Michigan State University. Chemical Engineering. Major Professor: Donald K. Anderson, Asso- ciate Professor. Thesis: A Study of Continuous Foam Fractionation.
Edward John Hayes, Ph.D.	B.A., M.A., Eastern Michigan University. Education. Major Professor: Don E. Hamachek, Associate Professor. Thesis: Relationships Between Self-Concept of Arithmetic Ability and Arithmetic Achievement in a Selected Group of Sixth Grade Students.
WILLIAM HENDERSON HEATER, Ph.D.	B.A., Denison University; B.D., Union Theological Seminary. Education. Major Professor: John E. Jordan, Associate Professor. Thesis: Attitudes of Michigan Clergymen Toward Mental Retardation and Toward Education: Their Nature and Determinants.
Louis Frederick Hekhuis, Ed.D.	B.A., M.A., Michigan State University. Education. Major Professor: Walter F. Johnson, Professor. Thesis: A Comparison of Perceptions of Student and Faculty at Michi- gan State University with Respect to Student Participation in University Policy Formulation.
Lynn David Hemink, Ph.D.	B.S., M.S., State University of New York. Education. Major Professor: Karl Hereford, Professor. Thesis: Measuring Efficiency and Effectiveness of University Instruc- tion — A Central American Case.
CLIFFORD W. HILL, Ph.D.	B.S., Wisconsin State College; B.S., M.S., Montana State College. Physiology. Major Professor: Paul O. Fromm, Professor. Thesis: The Response of the Interrenal Gland of Rainbow Trout (Salmo Gairdneri) to Stress.
John Henry Holmes, Ph.D.	B.S., University of Notre Dame; M.B.A., University of Cincinnati. Communication. Major Professor: Everett M. Rogers, Professor. Thesis: Dogmatism as a Predictor of Communication Behavior in the Diffusion of Consumer Innovations.
Morris Glen Huck, Ph.D.	B.S., M.S., University of Illinois. Soil Science. Major Professor: A. Earl Erickson, Professor. Thesis: Metabolic Changes in Oxygen-Deficient Tomato Roots.
Shirley Jean Hurley, Ph.D.	B.M., Simpson College; M.A., State University of Iowa. Education. Major Professor: Norman I. Kagan, Professor. Thesis: Self-Disclosure in Counseling Groups as Influenced by Struc- tured Confrontation and Interpersonal Process Recall.
Gordon Lee Jendrasiak, Ph.D.	B.S., M.S., Michigan State University. Biophysics. Major Professor: Barnett Rosenberg, Professor. Thesis: The Semiconductive Properties of Lipids and Their Relation to the Electrical Conductivity of Lipid Bilayers.
George Taylor Johnston, III, Ph.D.	B.S., M.S., Michigan State University. Physics. Major Professor: Jerry A. Cowen, Professor. Thesis: Electron Spin-Lattice Relaxation of Cr (CN) <sub>5</sub> NO <sup>3-</sup> in KBr and KC <sup>1</sup> .

#### DOCTORAL DEGREES - Continued

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Michael Edwin Kaelke, Ed.D.	B.S., Northwestern University; M.S., Western Illinois University. Education. Major Professor: Walter F. Johnson, Professor. Thesis: A Study of the Influence of Selected Orientation Programs on the Environmental Perceptions of Community College Transfer Students Attending Michigan State University.
Amir U. Khan, Ph.D.	B.S., M.S., Aligarh Muslim University. Agricultural Engineering. Major Professor: Howard F. McColly, Professor. Thesis: High Speed Precision Centrifugal Seed Planting.
Richard Michael Kocan, Ph.D.	B.A., Hiram College; M.S., Michigan State University. Microbiology and Public Health. Major Professor: David T. Clark, Associate Professor. Thesis: Anemia and Mechanism of Red Cell Destruction in Ducks with Acute Leucocytozoon Disease.
ROBERT WALLACE KOEHLER, Ph.D.	B.S., M.S., Pennsylvania State University. Business Administration (Accounting). Major Professor: James D. Edwards, Professor. Thesis: An Evaluation of Conventional and Statistical Methods of Accounting Variance Control.
CHARLES WESLEY KOLAR, JR., Ph.D.	B.S., M.S., Oklahoma State University. Food Science. Major Professor: J. Robert Brunnere, Professor. Thesis: Isolation and Characterization of Proteose-Peptone Compon- ents 8-Fast, 8-Slow and 5 from Cow's Milk.
Raymond Lee Kozub, Ph.D.	B.S., Wisconsin State College; M.S., Michigan State University. Physics. Major Professor: Edwin Kashy, Associate Professor. Thesis: An Investigation of the $(p,d)$ Reaction on N=Z Nuclei in the 2s-1d Shell.
Larry John Krafft, Ph.D.	B.S., Concordia College. Education. Major Professor: John H. Suehr, Associate Professor. Thesis: Influence of Human Relations Laboratory Training upon the Perceived Behavioral Changes of Secondary School Seminar Instructors.
LORENZ ANTHONY KULL, Ph.D.	B.S., Illinois Institute of Technology. Physics. Major Professor: Edwin Kashy, Associate Professor. Thesis: An Investigation of (p,d) Reactions in 1p Shell Nuclei.
Tung-Ming Lai, Ph.D.	B.S., National Chekiang University; M.S., Michigan State University. Soil Science. Major Professor: Max M. Mortland, Professor. Thesis: Pathways of Cationic Diffusion in Clay Minerals.
Jose David Langier, Ph.D.	B.S., Federal University of Rio de Janeiro; M.A., Michigan State University. Economics. Major Professor: Victor E. Smith, Professor. Thesis: An Economical Evaluation of the Nutritional Contribution of Food.

William Raymond Lassey, Ph.D.	B.S., M.S., Montana State College. Communication. Major Professor: Hideya Kumata, Professor. Thesis: Communication, Risk, and Investment Decision-Making in Costa Rica.
Lucy Fang Lee, Ph.D.	B.A., St. Mary of Springs College; M.S., University of Maryland. Biochemistry. Major Professor: John A. Boezi, Associate Professor. Thesis: Characterization of Bacteriophage gh-1 for <i>Pseudomonas</i> <i>Putida</i> .
RICHARD ELLWOOD LEINAWEAVER, Ph.D.	B.A., M.A., University of Colorado. Speech. Major Professor: Sidney Berger, Assistant Professor. Thesis: The Indigenous Drama of Meso-America.
Gary M. Lessman, Ph.D.	B.S., M.S., Southern Illinois University. Soil Science. Major Professor: Boyd G. Ellis, Associate Professor. Thesis: Zinc-Phosphorus Interactions in Phaseolus Vulgaris.
Mark Brooks Lloyd, Ph.D.	B.A., University of Idaho; M.A., University of Southern California. Speech. Major Professor: Gordon L. Thomas, Professor. Thesis: A Rhetorical Analysis of the Preaching of Bishop Francis Asbury.
Edwin Keith Longpre, Ph.D.	B.S., M.S., University of Michigan. Botany and Plant Pathology. Major Professor: John H. Beaman, As- sociate Professor. Thesis: The Systematics of the Genera Sabazia, Selloa and Tricarpha (Compositae).
Alex Bruce MacDonald, Ph.D.	A.B, Carroll College. Biochemistry. Major Professor: Allan J. Morris, Assistant Professor. Thesis: Guanosine Triphosphate Metabolism in Rabbit Reticulocytes.
Fred Allen Mangum, Jr., Ph.D.	B.S., North Carolina State College; M.S., Oklahoma State University. Agricultural Economics. Major Professor: Lawrence W. Witt, Professor. Thesis: Changes in the Grain and Livestock Economies of Italy with Projections to 1970 and 1975.
Vincent Louis Marando, Ph.D.	B.S., College of Education at Buffalo; M.A., Michigan State University. Political Science. Major Professor: Charles Press, Professor. Thesis: The Political Integration of a Metropolitan Area.
Charles Shaheen Markos, Ph.D.	B.S., Wisconsin State College. Chemistry. Major Professor: William H. Reusch, Associate Professor. Thesis: Photochemical Rearrangement of $\alpha$ , $\beta$ -Epoxy Ketones. An Elaboration of the Mechanism.
William Thomas Marquitz, Ph.D.	B.S., University of Dayton; M.S., Michigan State University. Electrical Engineering. Major Professor: Richard J. Reid, Professor. Thesis: A Method to Improve the Analog Computer Solution of Linear Systems.

#### DOCTORAL DEGREES - Continued

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Robert Joseph Marsh, Ph.D.	B.S., M.A., Central Michigan University. Education. Major Professor: Richard L. Featherstone, Professor. Thesis: The Residential Enclave: An Examination of Some Systematic Interrelationships as to Their Potential to Effect Control of the De- terioration of an Inner City Neighborhood.
Lloyd Wayne Martin, Ph.D.	B.S., M.S., Oklahoma State University. Horticulture. Major Professor: Jerome Hull, Jr., Associate Professor. Thesis: The Relationship of Strawberry Leaf Nutrient Content to Plant Performance.
John George Maurer, Ph.D.	B.S., University of Detroit; M.B.A., Michigan State University. Business Administration (Management). Major Professor: Dalton E. McFarland, Professor. Thesis: The Relationship of Work Role Involvement to Job Character- istics with Higher-Order Need Satisfaction Potential.
Edward Mathew McCabe, Ph.D.	B.S., M.S., University of Nebraska. Biochemistry. Major Professors: Hans A. Lillevik, Associate Professor and J. Robert Brunner, Professor. Thesis: Isolation and Properties of Kappa-Casein, Glycomacropeptide and Para-Kappa-Casein, Involved in Reaction with the Enzyme Rennin.
STEPHEN DOUGLAS MCCLELLAN, Ph.D.	B.A., College of Wooster; M.Ed., Ohio University. Education. Major Professor: Walter F. Johnson, Professor. Thesis: An Analysis of How the Role of Law has Affected Specific Relationships Between Public Universities and Their Students: Legal Guidelines for Administrative Decision-Making.
Brendan John McDonald, Ph.D.	B.S., St. Cloud State College; M.A., University of Minnesota. Education. Major Professor: Karl Hereford, Professor. Thesis: A Plan of Education for North Dakota: 1966-80.
Edward Roy McIntosh, Ed.D.	A.A., St. Petersburg Junior College; B.S., University of Florida; M.S., Florida State University. Education. Major Professor: Horace C. Hartsell, Professor. Thesis: A Study of the Efficiency and Effectiveness of Four Different Modes of Instruction in Providing Learning Experiences for High School Driver Education Students.
CHARLES ALAN MCKEE, Ed.D.	B.A., Bethany College; M.S., Michigan State University. Education. Major Professor: Floyd G. Parker, Professor. Thesis: A Study of the Role of the Engineering Manager and His Continuing Education Requirements.
James Dennis McLean, Ph.D.	B.S., University of Michigan. Chemistry. Major Professor: Andrew Timnick, Professor. Thesis: An A. C. Polarographic Study of Aqueous Cd (II). Effects of Large Amplitudes and Double-Layer Corrections.
Joseph Howard McMillan, Ed.D.	A.B., University of Louisville; M.A., University of Michigan. Education. Major Professor: William V. Hicks, Professor. Thesis: The Influence of Caucasian Teachers on Negro and Caucasian Students in Segregated and Racially-Mixed Inner-City Schools.

Jack Lynn Mendleson, D.B.A.	B.B.A., Butler University; M.B.A., Indiana University. Business Administration (Personnel). Major Professor: Frederic R. Wickert, Professor. Thesis: Manager Goal Setting: An Exploration Into Its Meaning and Measurement.
DALE HARVEY MESSERSCHMIDT, Ph.D.	B.S., Millersville State College; M.A., Michigan State University Education. Major Professor: C. Blair Mac Lean, Jr., Associate Professor. Thesis: A Study of Part-Time Instructors in Vocational-Technical Ed- ucation Among Community Colleges in Michigan.
ROBERT LOUIS MICHEL, Ph.D.	V.M.D., University of Pennsylvania; M.S., Michigan State University. Pathology. Major Professor: Kenneth K. Keahey, Professor. Thesis: The Roles of Vitamin E, Selenium, and Methionine in Dietary Liver Necrosis and Nutritional Muscular Dystrophy in the Pig.
Charles Jacob Mishler, Ed.D.	B.S., M.S., Purdue University. Education. Major Professor: George M. Johnson, Professor. Thesis: An Inquiry Into Religion in the Public School With Guidelines Relating to Voluntary Religious Expression and Teaching About Religion.
Norman Kent Moncur, Ph.D.	B.A., San Jose State College; M.S., Michigan State University. Physics. Major Professor: Thomas H. Edwards, Professor. Thesis: Analysis of the Spectra of Planar Asymmetric Molecules with Application to Hydrogen Telluride.
Mitsugi Nakashima, Ed.D.	B.S., University of Hawaii; M.A., Colorado State University. Education. Major Professor: Clyde M. Campbell, Professor. Thesis: A Study of the Opinions of Selected Students in the College of Education, Michigan State University, Concerning Selected Public School Educational Activities.
Gary Patrick Nerbonne, Ph.D.	B.A., Central Michigan University; M.A., Michigan State University. Speech. Major Professor: Herbert J. Oyer, Professor. Thesis: The Identification of Speaker Characteristics on the Basis of Aural Cues.
Wesu C. Ng, Ph.D.	B.S., University of Philippines; M.S., University of Wisconsin. Food Science. Major Professor: J. Robert Brunner, Professor. Thesis: The Isolation and Physical-Chemical Characterization of a Glycoprotein from the Proteose-Peptone Fraction of Cow's Milk.
Melvin Dennis Olmann, Ph.D.	B.S., M.S., Michigan State University. Physics. Major Professor: C. Duane Hause, Professor. Thesis: High Resolution Absorption, Zeeman, and Magnetic Rotation Spectra of Nitrogen Dioxide in the Near Infrared.
LEONARD DALTON ORR, Ph.D.	B.S.E., University of Michigan. Business Administration (Marketing). Major Professor: William J. E. Crissy, Professor. Thesis: Compensation of Salesmen in the Metals Service Center In- dustry as a Factor in the Profitability of the Firm.

#### DOCTORAL DEGREES - Continued

Robert James Parks, Ph.D.	B.A., Western Michigan University; M.A., Michigan State University. History. Major Professor: Stuart Bruchey, Professor. Thesis: The Democracy's Railroads: Internal Improvements in Michi- gan, 1825-1846.
Ronald John Pfohl, Ph.D.	B.A., Wartburg College; M.S., Michigan State University. Zoology. Major Professor: John R. Shaver, Professor. Thesis: Experimental Initiation of Cell Division.
WILLIAM F. PIERCE, Ph.D.	B.S., M.Ed., University of California. Education. Major Professor: Raymond A. Garner, Associate Professor. Thesis: Factors Associated with Participation by Michigan School Su- perintendents in Programs Authorized Under the Provisions of the Vocational Education Act of 1963.
Vera Leeola Pitts, Ph.D.	B.A., University of California; M.A., Sacramento State College. Education. Major Professor: W. Robert Houston, Professor. Thesis: An Investigation of the Relationships Between Two Pre- School Programs on the Adjustment and Readiness of Disadvantaged Pupils.
Clyde Rayburn Replocle, Ph.D.	B.S., Michigan State University. Physiology. Major Professor: W. D. Collings, Professor. Thesis: A Proposed Model for Renal Blood Flow Control.
William Morrison Rouse, Jr., Ph.D.	B.A., Glenville State College; M.Ed., Duke University. Education. Major Professor: William J. Walsh, Professor. Thesis: A Study of the Correlation Between the Academic Prepara- tion of Teachers of Mathematics and the Mathematics Achievement of Their Students in Kindergarten Through Grade Eight.
Charles S. Ruffing, Ed.D.	B.A., M.Ed., University of Pittsburgh. Education. Major Professor: Charles F. Schuller, Professor. Thesis: A Study of the Form and Function of Instructional Television Curriculum Committees.
Lowell John Sahlstrom, Ph.D.	B.S., St. Cloud State College; M.A., Michigan State University. Speech. Major Professor: Herbert J. Oyer, Professor. Thesis: Objective Measurement of Certain Facial Movement During Production of Homophenous Words.
RAYMOND SAMUEL SANDERS, JR., Ph.D.	A.B., Chico State College; M.A., Michigan State University. Psychology. Major Professor: Joseph Reyher, Associate Professor. Thesis: The Utilization of Sensory Deprivation Procedures for Increas- ing Hypnotic Susceptibility.
Rachelle Anne Schemmel, Ph.D.	B.S., Clarke College; M.S., State University of Iowa. Nutrition. Major Professor: Olaf Michelsen, Professor. Thesis: The Effect of a High Fat Ration on Body Weight, Body Com- position and Adipose Tissue Weights of Rats as Influenced by Age, Strain and Weight Reduction of Obese Rats.

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MARY SUZANNE SCHRIBER, Ph.D.	B.A., M.A., Michigan State University. Comparative Literature. Major Professor: John A. Yunck, Professor. Thesis: Louis Xavier Eyma and the French Image of America.
WALTER STANLEY SCHUTZ, Ph.D.	B.A., Otterbein College; B.S., M.A., Ohio State University. Speech. Major Professor: E. C. Reynolds, Associate Professor. Thesis: The Nature of Farce: Definition and Devices.
Frederick James Schuurmann, Ph.D.	B.S., Calvin College; M.S., Michigan State University. Mathematics. Major Professor: David G. Moursund, Associate Pro- fessor. Thesis: The Uniform Approximation of a Function and Its Derivatives by Polynomials.
CARROLL JACOB SCHWARTZ, Ph.D.	B.S., M.A., Southern Illinois University. Geography. Major Professor: Paul C. Morrison, Professor. Thesis: The Urban Geography of Morelia, Michoacan, Mexico.
Baldev Raj Sharma, Ph.D.	B.A., Panjab University; M.A., Oberlin College. Sociology. Major Professor: William H. Form, Professor. Thesis: Technology and Work Experience: A Study of the Indian Automobile Worker.
HERBERT BANCROFT SKERRY, Ph.D.	A.B., Harvard College; M.S., University of Wisconsin. Mathematics. Major Professor: William T. Sledd, Associate Professor. Thesis: On a Generalization of the Lototsky Summability Method.
ERNEST LEROY SLOAN, Ph.D.	B.A., Sacramento State University; M.A., Michigan State University. Sociology. Major Professor: James B. McKee, Professor. Thesis: Negro Community Leadership in a Northern City.
LEWIS EMIL SNYDER, Ph.D.	B.S., Indiana State College; M.A., Southern Illinois University. Physics. Major Professor: Thomas H. Edwards, Professor. Thesis: A Study of Coriolis-Type Resonance in Hydrogen Sulfide.
RALPH ROBERT STACKMAN, Ph.D.	B.S., A.M., Indiana University. History. Major Professor: Paul A. Varg, Professor. Thesis: Laurence A. Steinhardt: New Deal Diplomat, 1933-45.
MARILYN WELSHIMER STORY, Ph.D.	B.A., Ohio Wesleyan University; M.A., University of Michigan. Education. Major Professor: Twyla M. Shear, Associate Professor. Thesis: Some Attitudes that Indicate Job Satisfaction in Vocational Home Economics Teachers Graduated From Two Different Curricu- lums at Michigan State University.
DAVID FRANCIS STRAWE, Ph.D.	B.S., Tri-State College; M.S., Michigan State University. Electrical Engineering. Major Professor: Kun-Mu Chen, Professor. Thesis: Radiation in a Compressive Plasma by a Small Source Sur- rounded by a Plasma Sheath.
DOUGLAS NEIL SWANSTON, Ph.D.	B.S., University of Michigan; M.S., Bowling Green University. Geology. Major Professor: Maynard M. Miller, Professor. Thesis: Geology and Slope Failure in the Maybeso Valley, Prince of Wales Island, Alaska.

#### DOCTORAL DEGREES - Continued

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DAVID WILLIAM SWATTON, Ph.D.	B.A., Hunter College. Chemistry. Major Professor: Harold Hart, Professor. Thesis: Part I. The Photochemistry of 1,3,4,5,6,6-Hexamethylbicyclo [3.1.0.] Hex-3-en-2-one. Part II. The Acid-Catalyzed Rearrangements of 1,3,4,5,6,6-Hexamethylbicyclo [3.1.0.] Hex-3-en-2-one and 2,3,4,5,6,6- Hexamethyl-2,4-Cyclohexadienone.
KEMP LEE SWINEY, Ph.D.	B.S., University of Tennessee; M.S., Clemson University. Poultry Science. Major Professor: John H. Wolford, Assistant Professor. Thesis: Factors Influencing Members' Selection of 4-H Club Projects With Special Emphasis on Poultry Projects.
Albert Edward Szabo, Ph.D.	B.M., Ohio State University; M.M., Michigan State University. Music. Major Professor: H. Owen Reed, Professor. Thesis: A Forest Hymn.
Charles Emery Taylor, Ph.D.	B.A., M.A., Williams College. Physics. Major Professor: Jerry A. Cowen, Professor. Thesis: Nuclear Spin-Lattice Relaxation of Several Nuclei in Anti- ferromagnetic Rb <sub>2</sub> MnCl <sub>4</sub> .2H <sub>2</sub> O.
Eleanor Hollis Tedesco, Ed.D.	B.S., Cedar Crest; M.S., Boston University. Education. Major Professor: Peter G. Haines, Professor. Thesis: Analysis of In-Company and Out-Of-Company Educational and Training Practices for Clerical Workers of Leading Firms in the Greater Boston Area.
Harvey A. Tilker, Ph.D.	B.Ba., City College of New York; M.A., Michigan State University. Psychology. Major Professor: Gary E. Stollak, Assistant Professor. Thesis: Socially Responsible Behavior as a Function of Observer and Victim Feedback.
Wilson Lee Trickett, Ph.D.	B.A., Emmanuel Missionary College; M.A., Michigan State University. Business Administration (Management). Major Professor: William J. E. Crissy, Professor. Thesis: An Empirical Investigation of the Effectiveness of Executive Development Programs as Perceived by Participating Marketing and Sales Executives.
Gregory Louis Trzebiatowski, Ph.D.	B.S., Stout State College. Education. Major Professor: Charles F. Schuller, Professor. Thesis: An Evaluation of the Instructional Systems Approach in Higher Education.
Roberta Burrage Vogel, Ph.D.	B.A., M.A., Temple University Psychology. Major Professor: Bertram P. Karon, Professor. Thesis: A Projective Study of Dynamic Factors in Attempted Suicide.
Ralph Wahrman, Ph.D.	B.A., Queens College; M.A., Michigan State University. Sociology. Major Professor: Thomas L. Conner, Assistant Professor. Thesis: Status, Expectations and Sanctions for Deviance.
## SCHOOL FOR ADVANCED GRADUATE STUDIES

## DOCTORAL DEGREES - Continued

PHILIP DAVID WEINER, Ph.D.	B.S., University of Wisconsin; M.S., Kansas State University. Food Science. Major Professor: Albert M. Pearson, Professor. Thesis: Effect of Chelating Agents on Post-Mortem Changes in Muscle.
Stanley Edwin Weinstein, Ph.D.	B.A., Hunter College; M.S., Michigan State University. Mathematics. Major Professor: David G. Moursund, Associate Pro- fessor. Thesis: Approximations of Functions of Several Variables: Product Tchebycheff Approximations.
John Richard Weston, Ph.D.	B.S.A., University of Toronto. Communication. Major Professor: David K. Berlo, Professor. Thesis: Argumentative Message Structure and Prior Familiarity as Predictors of Source Credibility and Attitude Change.
Dean C. Wilson, Ph.D.	B.M., M.M., University of Rochester. Music. Major Professor: Paul O. Harder, Professor. Thesis: An Analytical and Statistical Study of the Harmony in Carl Nielsen's Six Symphonies.
John Reed Wish, Ph.D.	B.S., M.B.A., Ohio State University. Business Administration (Marketing). Major Professor: Charles C. Slater, Professor. Thesis: Food Retailing in Economic Development: Puerto Rico, 1950-1965.
Robert George Wyckham, Ph.D.	B.A., Waterloo College; M.B.A., University of Western Ontario. Business Administration (Marketing). Major Professor: William Lazer, Professor. Thesis: Aggregate Department Store Images: Social and Experiential Factors.
Donald George Wylie, Ph.D.	A.B., University of Michigan; M.A., Michigan State University. Education. Major Professor: Charles F. Schuller, Professor. Thesis: The Relationship of Fifty Learner Variables to Achievement in a University Freshman Course Taught Both Face-to-Face and by Closed-Circuit Television.
Kenneth Charles Wylie, Ph.D.	B.A., Albion College; M.A., Michigan State University. History. Major Professor: James R. Hooker, Associate Professor. Thesis: The Politics of Transformation: Indirect Rule in Mendeland and Abuja 1890-1914.
James B. Zaitzeff, Ph.D.	B.S., M.S., Michigan State University. Geology. Major Professor: Aureal T. Cross, Professor. Thesis: Taxonomic and Stratigraphic Significance of Dinoflagellates and Acritarchs of the Navarr Group (Maestrichtian) from East central and Southwest Texas.

## SCHOOL FOR ADVANCED GRADUATE STUDIES

## DIPLOMA FOR ADVANCED GRADUATE STUDIES

Graduated as of September 1, 1967

APARNA PANDIT, D.A.G.

B.S., M.A., Central College, India. Botany and Plant Pathology. Major Professor: Henry Imshang, Associate Professor.

STUART STERLING SMITH, D.A.G.

Graduated as of September 1, 1967

A.B., Western Michigan University; M.A., Michigan State University. German, Language and Literature. Major Professor: William N. Hughes, Professor.

## EDUCATIONAL SPECIALIST DEGREE

NICHOLAS ALBERT ABID, Ed.S.	B.A., Western Michigan University; M.A., University of Michigan. Education. Major Professor: Richard L. Featherstone, Professor.
VICTOR DAVID BORGA, Ed.S.	B.S., Northern Michigan College; M.A., University of Michigan. Education. Major Professor: Clyde M. Campbell, Professor.
PAUL FRANCIS BURNS, Ed.S.	B.S., M.S., Michigan State University. Education. Major Professor: Guy E. Timmons, Professor.
MAYNARD A. CHRISTENSEN, Ed.S.	B.S., M.A., Michigan State University. Education. Major Professor: Guy E. Timmons, Professor.
FREDERICK DONALD GRIBBLE, Ed.S.	B.A., Northern Michigan College; M.A., University of Michigan. Education. Major Professor: Herbert C. Rudman, Professor.
DOROTHY EVA GUENTHER, Ed.S.	B.A., West Washington State College; M.Ed., University of Hawaii. Education. Major Professor: Willa Norris, Professor.
James Martin Hansman, Ed.S.	B.S., M.S., Wayne State University. Education. Major Professor: Dale V. Alam, Assistant Professor.
John Edward Jansen, Ed.S.	B.S., M.A., Michigan State University. Education. Major Professor: Guy E. Timmons, Professor.
Mabel Louise Jones, Ed.S.	B.S., Central Michigan University; M.A., Michigan State University. Education. Major Professor: Floyd G. Parker, Professor.
John Edward Maturo, Jr., Ed.S.	A.B., M.A., University of Michigan. Education. Major Professor: James Costar, Professor.
REBECCA RIDDICK NEUMAN, Ed.S.	A.A., Paducah Junior College; A.B., Murray State College; M.A., Michigan State University. Education. Major Professor: Buford Stefflre, Professor.

## SCHOOL FOR ADVANCED GRADUATE STUDIES

## EDUCATIONAL SPECIALIST DEGREES — Continued

Donald Paul Pobuda, Ed.S.	B.S., M.A., Western Michigan University. Education. Major Professor: James E. Heald, Associate Professor.
Joseph Puvogel, Ed.S.	B.A., Eastern Michigan University; M.A., University of Michigan. Education. Major Professor: Stanley Heckert, Professor.
DONALD NEIL RAWLINGS, Ed.S.	B.S., Fenn College; M.A., Western Reserve University. Education. Major Professor: Ruby M. Junge, Associate Professor.
BEVERLY HAWES SEBASTIAN, Ed.S.	B.S., University of Michigan; M.A., Michigan State University. Education. Major Professor: Willa Norris, Professor.
Sudha Singh, Ed.S.	B.A., M.A., St. John's College; L.T., Licentiate in Teaching. Education. Major Professor. Fred J. Vescolani, Professor.
JANE PARKER WARD, Ed.S.	B.S., Wayne State University; M.A., University of Michigan. Education. Major Professor: Troy L. Stearns, Professor.

# COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

## THOMAS K. COWDEN, DEAN

Agricultural Economics

Mario Carvajalino David Lewis Peacock William Rollin Sherman

Agricultural Mechanization Edward Vincent Hallahan Edward B. VanDevender

Biochemistry Min Gee Kung Barry Lee Rhinehart

DEGREE OF

OF SCIENCE

MASTER

Dairy John Durand Benson Krishna Mohan Prasad

Fisheries and Wildlife

Glenn Anthony Duddles Alvin Lee Jensen Wilbur Corneal Johnson Edward Garrett Moon Thomas Morgan Rowold Food Science

James Andrew Koprowski John Gilbert Reagan Fecorazon A. Sunga

Forest Products and Packaging Donald Harold Baumgartner Neil Irwin Gilbert James Carlton Reed William Arthur Schmitt

Horticulture

Brian Walter Megilley John H. Stone

Resource Development

John M. Bohunsky Fred LeRoy Hoisington Frederick Thomas Kacprzynski Edward Arthur Mellman Soil Science

Johnnie B. Collins Raymond Stewart Smith Tung Kai Wu

DEGREE RECOMMENDED JOINTLY WITH THE COLLEGE OF ENGINEERING

Agricultural Engineering Irwin Perry Schisler Eudell G. Vis

## COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

Agricultural Business Joseph Arnette, Jr. Stephen Earl Palmer James Marvin Welke

Agricultural Economics

Robert Joseph Rasch Robert Lee Weisenreder

Agricultural Mechanization

Charles Lambert Brehse Thomas Edward Dusseau

Animal Husbandry

Clare M. Anders Michael Lloyd Bigelow Patrick John Burke H\*\*Chester Arthur Schriesheim

> Building Construction Dennis John Alderman Kenneth L. Coulston Richard LaVern Dunlap

Crop Science James Edward Bogart Bruce Gordon Thorpe

Dairy

Thomas Earle Clegg Thomas Solowczuk

Fisheries and Wildlife

Donald Frank Appoloni Carl Philip Baumgras Bruce Paul Conant David Allen Drummond David Lee Egger Robert Charles Flanders John Wayne Frye William Ray Walter Graebner William Warren Hempsted William Harold Hutchinson David Ross James Ronald Richard Odom Bruce Alvin Snyder John Leslie Stonhouse \*Alton John Westover William John Young

Food Science Karl Robert Kleinschmidt \*Kenneth Kobayashi Forestry

Thomas Allison Balthaser Darwin LeRoy Bennett Thomas Arnold Berry **James LeRov Caswell** Edward Webster Caveney, Jr. Robert Arthur Cool Jerome Edward Dombrovske David Michael Dudak John William Engel Michael William Foley H\*\*Thomas G. Frisbie John Spencer Hatch \*Norbert Carl Kulesza, Jr. \*\*Thomas Vincent Lea Lvnn Benjamin Mohr \*\*Douglas Ray Moran Thomas Alex Nemeth Michael Perry Nichols Joseph Frank Prochaska, Jr. John F. Roe Forrest Albert Ruppert William David Schrand Stan R. Spoor Frank James Stark

> Horticultural Marketing Charles Reid Merckel, Jr.

Thomas Lee Tapp

Keith Robert Tong

Lumber and Building Materials Marketing

\*James Kenneth Van Drunen

Packaging

Truman Alden Ames Francis Joseph Bleicher Donald Joseph Bracken Frank Emery Breining Thomas Felix Budny Richard Clare Bush Donald William Clugston Carroll Gilbert Deuel Johnny Engleman Daniel Don Evert Raymond C. Frey William Albert Green Gary Lawrence Gresge George Edward Gross Warren Rick Hensey James Oliver Jones Andrew Richard Joseph Richard Wright Kennedy Theoador Kundivich Don L. Larson Jerry Patrick Little William Thomson MacDonald Richard Morgan McMillan Leonard Joseph Meyer Larry Gordon Schilling John J. Spitzley Joseph Stefanski, Jr. Frank Edwin Steinberger George Alex Wakefield Ronald Ervin Watson Larry Edward Wingerter

Park Management

\*Donald Russell Hehn Kenneth Max MacKellar David Newell Sinclair

Pomology and Vegetable Production Peter Watson Kelly

Poultry Science Bruce Whitlock Moore Frank Van Amburgh

Soil Science

Jonathan Oko Braide \*\*Martin Eze Obi

Wood Processing and Technology Richard Dale Jewett Herbert Leroy MacDonald, Jr. Gary Edward Wejrowski

DEGREE RECOMMENDED JOINTLY WITH THE COLLEGE OF EDUCATION

Agricultural Education

Bruce D. Brown Carl John Kaechele Warren Ollie Reynolds Michael J. Rockafellow Henry Albert Stoutenburg

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DEGREE OF

BACHELOR

OF SCIENCE

# COLLEGE OF ENGINEERING

JOHN D. RYDER, DEAN

DEGREE OF MASTER OF SCIENCE Chemical Engineering Richard Jyh-Wen Chen Gwang Hoon Chung Wayne Howard Clifford Edward Charles Hohmann, Jr. Joseph G. Masin Civil Engineering

Manouchehr Farnoush Luis Alberto Galuzzi Akbar Kavianipour

### Electrical Engineering

Lawrence Joseph Adamcik Dennis Lee Arndt Parminder Singh Aujla Alan Frederick Lietzke Satvinder Pal Singh Mayall Michael David McIntosh William Edwin Merritt Robert Daniel Stephens, III Douglas Victor Whiting

DEGREE OF BACHELOR OF SCIENCE Chemical Engineering John Riekstins George Francis Wondolowski

Civil Engineering Elizabeth Grace Armitage John Sangren Germain Thomas Alan Hamming Robert Laurence Ryden Electrical Engineering Craig Charles Druskins Masoud Othman Quhwash

Mechanical Engineering

Marinus Donze, Jr. Rodney Warren Harris \*David Edward Heyer Robert Franklin Kiesling Ronald Leo Kociba James Lyman McIntosh John Edward Oleniczak John Patrick Ragan H\*James Carl Thelen Metallurgy

Phil Kyu Kim \*\*Ross Faye Luther

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Agricultural Engineering

William David Baedke Thomas Meuser Robertson Frederick Anthony Zemke

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# COLLEGE OF HOME ECONOMICS

JEANETTE A. LEE, DEAN

DEGREE OF MASTER OF ARTS

Education for Home and Family Living Pauline Buss Schaffer

Home Management Mary Ellen Benedict

**Related** Arts Mary Hussey Jacquelyn Williams McCray Bonnie Maas Morrison Roxy Ann Pike Jenny Gay Ruth

Textiles and Clothing

Karen Evelyn Engel Janet Elaine Harrell Winifred Sue Stephenson Hundley

DEGREE OF MASTER OF SCIENCE Institution Administration **Diane Louise Vachout** 

DEGREE OF BACHELOR OF SCIENCE General Clothing and Textiles Nancy Lee Baden Charlotte MacKinnon Dagget

**General Home Economics** Judy June MacArthur

Interior Design Patrice Diane Bisbee Paula Ann Cingota Margaret Ellen Knack DeeAnn Moreen Sarkozy

Retailing of Textiles and Clothing

Carol Lynn Hamal Mary-Margaret Jones Julie Ann Klann \*Nancy Lee Olsen

\*Lois Jean Ruffing Lilli Ursula Schmeichel Maryann Marie Skinner Kathleen Ann Stewart Bonita Jo Yeip

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Child Development and Teaching

\*Sally Gertrude Adams Barbara Anne Brown \*Cynthia Mulnix Conway

Melody Jo Ellis Margaret Collins Erhardt

- \*Ann Marie Gray \*\*Barbara Sass Hammond
- Marie Elaine Massu

#### Home Economics Teaching

Joy Ann Alexander Clara Elaine Barbott Marilyn Eileen Brown Carole Anne Gouzie Candace Lynn Livermore

\* Joanne Mary Toebe Betsey Jane Trowbridge H\* Kathleen Mary Truesdell H\*\*Janet Lee Valette

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# COLLEGE OF VETERINARY MEDICINE

### WILLIS W. ARMISTEAD, DEAN

DEGREE OF DOCTOR OF VETERINARY MEDICINE

Paul Gerald Alderman Marilyn Patricia Anderson Michael David Appleford William Morris Aufderheide Arlo Dale Baggerley Duane Robert Baker Paul Langdon Barrows \*Lois Emma Baumgartener Ronald Eugene Borchard David John Boyd Tristram Coffin Carpenter Michael Lawrence Caston \*Dennis P. Chuchel Dale Erwin Clark Carol Ann Dickinson Claude Edward Dilts \*David Lee Erlewein

Veterinary Medicine

\*John William Albers

Kenneth Marvin Harr Gary Wayne Hegenauer Michael Herschel Kaplan Martin Leon Kerske Raymond George Koch \*\*Gary James Kociba \*Ronald Earl Kreeger William Herman Laughlin Richard Kent Loeffler \*Kenneth Paul McCrumb Ralph Morgan McGovney Patricia Ann Meyer Anthony Herbert Miceli David Peter Nelson

Martin Karl Feldman Michael Edward Gamroth

\*Gerald Arthur Graf

\*David Grant Haarer

Charles Alexander Goerner

Donald James Bone William Frederick Ciffin Benjamin Herring Colmery, IÍI Ingeborg Lilly Eggert John David Freed \*Steven Jay Ginsberg James William Klemach

Paul Dennis Nelson Wayne Dwight Oxender Laurel Pinales Mark Sander Povar Michael Thomas Powers Michael Farr Ranney \*Albert Darwin Rollings \*Donald Virgil Sargent, II Leonard Arthur Sherman \*John Marcus Simon John Marcus Simon Wilfred Dean Smith Gary William Sperber Arthur William Tremper Herbert Lewis Tscheiller Stephen S. Unger Henry Matthew Vaupel Brent Elwin Walker Charles Fraderick Ward

Charles Frederick Ward Allan David Wise

William Philip Koelsch Kenneth Gerald Mayhew Ronald Howard Mills William Herman Nichols David Tayman

DEGREE OF BACHELOR OF SCIENCE

Medical Technology \*Bonnie Kay Gilman

Veterinary Medicine Martha Jane Arndt Stewart Banes Barcalow **Gregory Lewis Boggs** 

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# COLLEGE OF BUSINESS

ALFRED A. SEELYE, DEAN

DEGREE OF

MASTER

OF ARTS

## Economics

**Daniel** Aceves

Royle Pruitt Carrington Arthur Thomas Clay, Jr. William C. Kleiner Jon Arthur Krutar Mohanlal Hiralal Patel Prayun Phuphatana Jeffrey Arthur Roth Abou Dramane Sylla Arshad Zaman

### Graduate School of Business Administration

DEGREE OF MASTER OF BUSINESS ADMINISTRATION

Elyo Alaluf Robert Hervey Aldrich Beni Algranti Kanwar Sohan Laull Anand Thomas Robert Anderson Robert Yee Hao Bao Elba Franklin Baskin Ronald Wayne Bertagnoli Mary Margaret Bradley David Howard Brown Homer B. Brown Henry Robinson Buck John Carl Burnham Edward Dean Butler Sinasi Celikkol Edward David Chin Celso Albano Costa William J. Crowley, Jr. John Arthur Culver Anisia Daltro Da Silva Donald James Debri Douglas Mercer Denholm John Charles Devona Lawrence Andrew Doyle, Jr. Charles Arthur Dumas Robert Charles DuVall Peter Ehrensperger James Thomas Elgin Ivon Arthur English William Grayson Fischer Merrill James Freitas Thomas Gallagher Joseph E. Geary

Russell Frederick Gee James Brooke Goodman Robert Renick Gregory Paul Edward Gricus Neil Leslie Harmon Nizarali Mohamedali Hasham Peter Richard Hewett John Donald Hightower Raymond Elmer Hogan Donald Martin Horstman Rex Phillip Huguelet Charles Edward Johnson José Carlos Junqueira Ayres Filho Brij Mohan Kacholia Wilhelmina Kieft William Warren King Shuhei Koike Michael James Krach Thomas Michael Kushak James William Larson Robert Paul Levesque Onto Gail Lindy Shyam Sunder Lodha Walter David Logan George Leonard Lowe Truman Bruce Marsh Frederick Louis Martin Fredrick N. Martin Richard Glen Martin Dionizio De Souza Martins John Palmer McCaskill Lawrence Michael Meleski Matthew Thomas Mulcahy

George Nastas, III Arnold Edward Norman Julius Onuora Onah Edward John Pappas Bruce Arlin Parke Jose Rosalvo Peixinho Dale John Peterson Neville Symes Petts Bruce Jeffrey Purcilly John Morgan Raymond Robert Michael Rosselli William Edward Schaefer **Richard Manasse Schwartz** John Charles Schweigert Robert Roland Short Robert Duncan Sipprell, Jr. Barton Lamoreux Smith Gaylord Norman Smith William Stuart Smith Bruce S. Staff Paul Stagg, Jr. Donald Ernest Strange Pudukottah Ramachandran Swaminathan R. Tedjasukmana David Garfield Thaler Ross Clare Towne James Joseph Turner Jon Alden Walgren Mark A. Walzer Dennis Leroy Weaver Leo Milton Weeks Stephen Ben Williams Emmett William Young

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William John Setterington

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Peter John Stockslager William Dennis Yanaros

Executive Secretarial Administration Carol Jean Neipert Sharon Ann Sinda

#### Financial Administration Thomas Richard Frey Thomas J. Parker Harry Edward Resis, Jr.

Food Marketing Management Richard Ronald Haggen Michael Robert Sands James Leslie White

General Business Administration Richard Martin Babcock Leland Douglas Blatt Thomas Paul Brogren Christopher J. Bullis James Marvin Clarke James Robertson Clarke Myra Stephanie Cohn Roger Alan Conant Norman James Daniels Joseph P. Dragan Frederick Thomas Finfgeld James William Freeman Stephen Worth George Peter B. Clance \*\*William James Harrison Clenn Royle Hoppenstedt \*\*Austin Lawrence Johnson Stephen K. Kameda Gene H. Knitter Byron Frederick Latter Robert Hoyt Nissley John Everett Olsen William Robert Peterson, Jr. Raymond Richard Reaume Thomas Oliver Robertson Thomas Dale Russell Paul Joseph Spitzley Thomas Terry Stoner Robert Arthur Vollwerth Craig Michael Woodstock James William Zimmerman

Health Facilities Management Martin Jerome Rosenfeld

Hotel, Motel and Club Management Brooke B. Bentley Charles William Broeman, II Thomas Alan Davis David Michael Martin Paul William Ross Sherry Ann Smallridge

Hotel and Restaurant Management

James Meakin Beall William George Drake, Jr. Roderick David Easton Richard Lloyd Hamill Alan Anthony Herc William Leo Kramer Edward Frank Macchi John Bernard Maliszewski James Richard Mather Alan George Mimms Dennis James Murray James Conway Ratliff Roger Hull Ream Kenneth Dwight Ridley Fred John Schneider \*Dale B. Sherretz Bruce Michael Stein William Peter Weidner Judith Ann Zehnder Michael Steven Zelski

Industrial Administration Stephen Douglas Anderson Richard William Bachtel Kenneth James Bartholomew William Richard Craig Eric John Dammeyer Barry James Johnson \*Jerry Wayne Pace Garson Page-Wood Gary Howard VanOverloop William Warburton, Jr. Richard Clarence Wittman

Marketing

William Everett Allen George Marshall Buyaki Charles Richard Runft Cherney David Paul Colby Stan George Diroff Donald LeRoy Eitniear, Ir. Barry L. Furgason Maurice Alan Grondin Thomas LeRoy Kelpin John Christopher Kinsel David William Knapp Thomas Kolb Larry Roland Lutz Robert Jeffrey McCall Kathleen Ann McPherson Thomas Barton Morris Conrad Carl Mox **Duncan Hess Myers** Joseph Wesley Parrish Stanley Robert Pijanowski, III John Stuart Stankrauff David Hugh Thorne Gordon Charles Wilkinson Thomas Roy Yoder

Personnel Administration Richard Anthony Allingham Patricia Ann Bohl Donald Ernest Grazioli Eugene Grembowski Daniel K. Light William Fitzlin Rice

Transportation Administration Samuel David Catalano Edward Joseph Chapman

DEGREE RECOMMENDED JOINTLY WITH THE COLLEGE OF EDUCATION

Business and Distributive Teacher Education Roberta Catherine Bostick Philip Micheal Hoag Ronald Lee Morris

DEGREE OF BACHELOR OF ARTS

# COLLEGE OF EDUCATION

### JOHN E. IVEY, JR., DEAN

### Education

Paul Arrow Ahlstrom William Richard Anderson Lenore Estelle Barker Charlotte Ann Bawden Fred E. Brown Gail Scholder Brown Lynne Marie Brown Robert Arthur Burd John Phillip Carter Wayne Flyod Case William Edward Case Lewis Ray Chalker Banjong Choosakulchart Edwina Tyrrell Ciolek Robert LeRoy Cobb Tracy Lee Davis Anthony Constantino DiCesare Caroline Adair Dimmers

Caroline Adair Dimmers Jack Arnold Enderle Bonney L. Gibbard James Loren Gibson Gary Lynn Gillespie Robert L. Good Michael Clark Greenisen Barry Joseph Guinagh Robert James Haligas Janet Kay Harms

Elementary Education Judith Lorraine Archer

Cheryl Lynn Austin

Louisa Kerr Hart Dixie Darlene Harvey Joseph Paul Herchock Robert F. Hoffman Jan Ellen Jacobson Lee Herman Janssen Evelyn Louise Johnson **Constance Cummings Jones** Anuchin Kanishtarat Hubert Martin Karl Romaine E. Kious James Eby Kroh Carol Ann Krumwiede Eleanor Bzduch Lamos Ann Feeney Lane Marilyn Jeanne Laninga Phob Laohapibul Thomas Henry LaPres Merril Thomas Lardner Marcia Jo Malbone Paul Fredrick Marks Martha L. McAlice Evelyn Lasky Miller Grace Manning Miner Mary Ann Mysliwiec Mildred Lucille Nickel Marilyn Betty Oleson Sally Ann Parent

\*Luella Eid Digerness

Ellen Ruth Engelhart

Diane Lynn Estfan \*Janice Marie Froberg

H\*\*Joan Marie Frye Calvin Dean Fuller

\*Sandra Goodell

Carolynn Joyce Dolphyn

\*Margaret Allen Goodrich

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Phyllis Lynne Graham \*Larry Ronald Grow

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Mary Ann Pearson Dwight Lee Peterson Phyllis Marie Pierce William Walter Powell Samuel David Rabina George Joseph Sargeant J. Gordon Schleicher Mabel Pauline Schutmaat Sharon Ellen Scrivens Roberta Sue Shaeffer Betty Jean Skulstad John Avery Slagle Henry James Smith James Charles Spindler Albert Martin Spurgat Jonathan Paul Stein Diane Marie Taylor Henry J. Taylor John Robert Tedrow Marie Antonette Terranova Sandra Sue Thornton Dorothy Anne Steinbrook Tingley James Nickolas Turner John Saku Varfley, Jr. Christine Ann Wengert Anne Harrison Whitmore Florence Green Williams Ruthanne Shumaker York

Barbara A. Haney \*Alice A. Hoban Virginia Marcellino Hogan Suzanne Lynn Hummel Leslie A. Hursfall Cathryn Ann Ingolfsrud Irene Krohn Jaffa \*Judith Allison Joslyn Judith Ann Juntikka Myrna Mae Kephart \*Donna Lee Collins Kieser Barbara Jean Kocsis \*Lois Eleanor Kuehl Carol Jeanne LaPensee Victoria Rosemary Lepisto Carol Ann Long

DEGREE OF BACHELOR OF ARTS

DEGREE OF

MASTER

OF ARTS

Carole Jean Baker Leona Jane Barratt Janet Louise Bedford Susan Jane Beyer Darlene Carol Brace Joan Carol Bratt Priscilla Sharon Carr Martha Elaine Cobb Barbara J. Cove Lauren Eve Dalzell \*\*Erica Marie Dean Merry Jo Dewey \*\*Pamela Starr Newbauer Dewey

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## COLLEGE OF EDUCATION

DEGREE OF

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OF SCIENCE

 \*Juliet Brand Lorscheider Martha Jane Lund
 H\*\*Jeanne F. Lutus Karen Maxine Lyons Dianne Lynn MacKellar
 \*Carol Sue Mantey Mary Jules Mars Susan Elizabeth McCann Colleen Frances McGrath Susan Felton Mead Robert Harry Meier Rudene Ilene Meyersohn Elizabeth Louise Milton Aileen Emiko Morigaki Phyllis Rae Mosier \*Elaine Katherine Neumeyer Mary Suzanne Nicholie Robert Alan Orloff Judith Mae Pelto Katherine Ruth Peterson Bernadette Apollonia Pilukas Kathleen Mary Pollock Michele Pryor Renaud Eugene Rutledge, III Clifford Earl Schuett Gwendolyn Jeanne Sparpana Charlene Spero Kathryn Ann Spruill Nancy Eileen Steinberg Jean Mary Tipton Calista Annette Trembath M. Karen Vollman Anne Carol Waits Diane Marie Waldron \*Marilyn Weber Anne Allan Whitney Mary Ann Wohifert Sallie Anne Wygant Andrea Louise Ziembiec

Health, Physical Education and Recreation Bonnie Barnes Barker Michael John Bowers Kay Ann Carrigan Ryan Michael Davis Barry Lee Elder Cecelia Marie Fritz Ronald Kinsley Grant \*Mary Dee Graves Patricia Ann Herhold Richard Lynn Holmes Mark Reynolds Hoyt Billy Wayne Jones

Thomas Kaawai Kaulukukui Edward James Macuga Dennis Minoru Maedo Donna Y. Mukogawa Martha Cecile Munter James David Phillips Karl Edward Richards Carl LaRue Salling, Jr. William Donald Steckley Robert Edward Steele Norman Wesley Stevens Jana A. Thomas Lynn M. Tischler Cheryl Louise Towne Roland Patrick Walcott Beverly Ann Walker

#### Industrial Arts

Gerald Fredrick Cavanaugh \*William Richard Darr William Sanford Hull \*David Ralph Pontius

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# COLLEGE OF COMMUNICATION ARTS

JACK M. BAIN, DEAN

Advertising Yogesh Kumar Nijhawan

DEGREE OF

MASTER

OF ARTS

Audiology and Speech

Science Sara Greer McClellan Michael Anthony Nerbonne

Communication Efiong Ben Attah David James Frederick Beatty Gerald Winn Card Walter Harold Combs Brenda Dervin

Advertising Alan Lee Arend Ronald Keith Brown Bryan Frank Carpenter Dennis Marvin Dahnke Daniel Jay Gersten John Michael Hauer lames Ingram Michael Frederick Irvine Carole LaVelle Koffman Gary George Michaels \*John Stephen Miller \*Arden Niles Neumann Edson Kendall Pool, Jr. Ronald William Rowe Charles Edward Rudy, V \*Sarah Jean Tripp Bradley H. Wire

Audiology and Speech Science Michael David Huxley

Communication John Norman Seaman, Jr. °Chiyono Jean Sutow Rosarita Margaret Hume John Joseph Kochevar Jeanne Ching-chen Kuo Lawrence James Tate

Journalism Lyman Louis Fink, Jr. William Edward Garber

Speech and Theatre Bette Rae Blackburn Herbert Wayland Cummings Kent Martin DeYoung Clara H. Lang

Journalism James Monroe Boersema Doil Clifton Brown Jerry Lee Dykstra Thomas William Grein H<sup>\*\*</sup>Dayle Gade Schwarzler Jeffrey Russell Stone

> Speech and Theatre Thomas Alan Bocci Judith Sutkin Rich

Television and Radio William Andrew Ayvazian Michael Alan Carraher Robert Clayton Hall, Jr. Ernest Steven Jensen Jere Richard Kimmell Samuel Leiter James Clarence Lewis Ronald Edgar Nicodemus Timothy Andrew O'Brien, III James Timothy Roberts Carlton Howard Smith, II \*Marilyn Louise Wilkinson Bruce Lee Woodhull Raymond Louis Monte Richard Lauri Neva Carolyn Anne Sadenwater Gretel Geist Stensrud F. Lee Thornton

Television and Radio Roger Allen Grant James Conrad Lau Jon Hamilton Little Joseph James Marks Thomas Kent Perry Ernesto Isip Songco Joel Barry Sternberg Laurence Bevan Stone

DEGREE RECOMMENDED JOINTLY WITH THE COLLEGE OF EDUCATION

Audiology and Speech Science

Diana Mary Baughman Pamela Kay Calhoun Heather Sue Henry Sandra Larsen Keller

Speech and Theatre Cynthia Ann Baston H°°Cynthia Dee Goldstein Perry Albert Maynard Katherine Elizabeth Nelson Connie Jean Simpson Gary Edward Sturm

DEGREE OF BACHELOR OF ARTS

# COLLEGE OF ARTS AND LETTERS

PAUL A. VARG, DEAN

DEGREE OF MASTER OF ARTS

DEGREE OF

MASTER OF

FINE ARTS

DEGREE OF

### MASTER

OF MUSIC

### DEGREE OF

BACHELOR

OF ARTS

Art Luz Maria Aveleyra Diane Lynne Cheeseman Carol Cumpson Gadsden Thomas Charles Gale Joshua Goldberg Mary Michele Hamel Carol Ann Little Anne Louise Schloemer

Comparative Literature Lawrence Olivier Baril Dennis Centrell Cullinan

English Etta Claire Abrahams Philip Allan Billings George Malcolm Cook

*Art* Fikrat Jer Jes Al-Khouri James Bernard Nutter

Music Education Janice Caroll Leggette Natalie M. Matheson Robert Sahagian

Art History Harriet Ann Davis Carol Jeanne Fretz

Art Practice Louis Michael Baldori Don C. DeMeulemeester Robert Ernest Mosher \*\*Roberta Ann Oppenheim Thomas Alan Price Gerald Anthony Proietti Thomas Harold Stevens Sheridan Ann Sullivan

H Honors College \* With Honor \*\* With High Honor English

Robert A. Bonin \*David Lawrence Haenke W. Stephen Hathaway Robert Bruce Moore Ann Meredith Moulton Howard Joseph Wicker James Theodore Schaefer

Valerie Patricia Flowers

**Robert James Morris** 

Elisa Sandra Tacher

Jeanette Carolyn Loeb

Andrea Marie Bobeck

Lotte Elizabeth Lauf

James Archibald Burnham

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French

German

History

Brigitte Kull

James Richard Huffman

Lawrence Edward Mintz

Pamela Graham Schlosberg

French H\*\*Faith Lindgren Hanmer Sandra Sue Keast German

H\*\*Kathie Lynn Coblentz Thelma Ann Schaeffer

History

James Elton Burnett Michael William Doughty Jane Helen Frink Stephen Barry Miller James Francis Schultz Richard Carl Timmerman

James Wood Diamond John Raymond Doerksen Lloyd Griffiths Fulton Joseph Jay Galin Donald James Manning Terry John McKane Anthony Raymond Travis Jack Terry VanderVen

Musicology Roger Stanley Gustafson Ray William Stilwell

Spanish Benjamin A. Burgos Raul Muñoz Helen A. Parker David V. Walsh

## COLLEGE OF ARTS AND LETTERS

DEGREE OF BACHELOR OF ARTS Humanities Robert Norman Dunn Nils Stuart Ericksen Margot Hughes Hartka Margaret Ann Honkala Nancy Jean Kuch Bob D. Michaluk Constance Mary Mulholland Jeffrey Conrad Romero Gary Alan Smith Robert Bruce Turnbull Alice Gratkowski White

Philosophy Ronald Wayne Bittner Ray Wesley Jackson, III H°°Richard Thomas Weyer, Jr.

> Religion Mervyn Arthur Pettapiece

Spanish Eulalio Mario Briones Angela Maria Valle

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Art Practice Carol Jane Denkhaus Ciré Sue Gray Vickie Lynn Landsparger Sarah Catherine McClurg Pamela Cheryl Walker

### English

- Lynne Blair Bogutz Denise Mina Brown Ann Roberta Feldman \*Charlotte Lynn Hardin Henderson
- \*Robert Michael Howey Robert William Hoyer Mary Elaine Kalisewicz H\*Sheryl Weisswasser Kilpatrick
- H°Sheryl Weisswasser Kilpatric Karen Ann Kivimaki °Margaret Rae Lipson H°Maxine Anne Parshall
  - Brenda Lee Phipps \*Michael Holmes Ritchie Jere Greear Stone Helen Ruth Wickstrom Joy Ilene Woodhams

#### French

\*Susan Ellen Harris Joyce Patricia Hilbert Mary Lucille Kroupa Mary Ellen Novak Sylvia Bates Taylor Elizabeth Jan Winter German

- \*John Willis Arnold
- \*\*Kathryn Louise Jones
- \*James Craig Norsworthy H\*\*Linda K. Smith

History Ruth Elaine Babbitt Annajo Gadd Elliott Dennis Gorov Robert Benedict Grycan Robert James Harris Theresa Sharon Holder Roberta Frances Johnson Ellen Jane Kolemainen Robert Lee Koster John Thomas McLogan Andria Marie Migday Pamela Elliott Pallas John Allen Perkins William Arthur Rogers \*Bruce Alan Rubenstein Michael Wayne Schott

Spanish

Janet Marie Galm \*Linda Hadesia Said

DEGREE OF BACHELOR OF

FINE ARTS

Art Practice Thomas R.A. Kuester Bryant Lowell Mitchell \*Robert William Olsen, II Robert John Phardel Bruce W. Schug \*Patricia Jean Taylor DEGREE RECOMMENDED JOINTLY WITH THE COLLEGE OF EDUCATION

Art Practice Margaret Elizabeth Bauer

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BACHELOR

OF MUSIC

Music Theory — Composition Earl James Ashton

Music Therapy Barbara Pearl Crockett Patricia Johnson McCandless DEGREE RECOMMENDED JOINTLY WITH THE COLLEGE OF EDUCATION

School Music \*Mary Jane King \*Sandra Irene Moeller \*June Ann Raad \*Carolyn Jean Woolpert

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# COLLEGE OF NATURAL SCIENCE

RICHARD U. BYERRUM, DEAN

DEGREE OF MASTER OF ARTS Mathematics James Richard Buddenhagen Dennis Charles Hass Ching-hsiang Hung David Stratton Tucker

DEGREE OF MASTER OF ARTS FOR TEACHERS General Science James Regdnual McDuffie Mathematics

Donna May Deter

Physics William Henry Knapp, III

DEGREE OF MASTER OF SCIENCE Biological Science-Interdepartmental Robert W. Asplund Farideh Hooshmand Gloria M. Calaf de Iturri Sergio Jose Iturri John Edison Lawrence Lawrence Earl Maples Sandra Louise Szladek

Biophysics Elwood Albert Linney

Botany Harold LeRoy Allen Virginia Ann Jones Chester James Michalski

Chemistry James Edmond Clune Lauraine Anita Dalton Norman Allen Fishel Paul Russell Handy Mohammed Abdul Khuddus Sandra Wollert Watson

Entomology Paul Edward Boldt Ruediger Carl Hillmann Emmanuel Chukwuemeka Igbokwe Marcus Tully Wells, Jr.

Geology Michael William Barratt Ahmed Nasir Basahel Jonathan Bork Paul Leonard DeWaele, Jr. Walter I. Dobar Warren E. Keith

Mathematics Julie McQuillen Borden Francis Leon Jones Israel Lindenfeld Fang-Hua Lo John Michael Nienberg Charles John Parry Dean Edward Sanders Chester Terrance Trahan

Physics Dwight Dowe Hinds Helmut Wolfram Laumer Thomas Joseph Walberer

Statistics Ching I. Chang Allan Oaten

Zoology James Richard Bowers Gary Carl Peter Lenn Dalby Gary A. Heidt Robert Eric Keen Gordon Laidlaw Kirkland, Jr. Anita Veleria Patterson Stephen George Purdy

## COLLEGE OF NATURAL SCIENCE

### DEGREE OF

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Chemistry Robert Thomas Durbin

Mathematics Heidi Arthur Griffith DEGREE RECOMMENDED JOINTLY WITH THE COLLEGE OF EDUCATION

Mathematics \*Patricia Briggs Bredwell \*Bonnie Lee Burden \*Susan Ellis Elaine Frances Krajenke

Biochemistry Raymond Gregory Jaglowski Rodger Dale Loutzenhiser H°

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Botany Beatrice Olujie Nwanma Nwuke

Chemistry Bruce Kolter

Entomology Neil J. Lamb

Geology Paul James LeAnderson Wayne Arnold Schmidt

Mathematics Mahmoud Ahmadi H<sup>••</sup>Leland John Buchele Rostam Ross Dinyari Evans Christian Harrigan H<sup>••</sup>Barbara Jean Koehler • \*Nancy M. Zander Microbiology

Rosalind C. Mildner

Carol Tracz Masin H\*\*Andrew Sulen, Jr.

> Nursing Sally Diane Davis Joanne K. Heckert

Physical Science-Interdepartmental John Steven Fox Larry Edwin Prout

Physics Frank Robert Burgener, Jr. H<sup>\*\*</sup>Kenneth Gilbert Valentine

Physiology H\*Michael Thomas Longstreet

Zoology John Arthur Buege David James Chesnut Patricia Ellen Price Jon Charles Waskiewicz Joel Vaughan Woodruff DEGREE RECOMMENDED JOINTLY WITH THE COLLEGE OF EDUCATION

Biological Science-Interdepartmental Susan Gail Andres Robert Burton Breckenfeld Carl Duane Chapman D. James Heaton Harold Ephner Hicks, Jr. Darel Bruce McClellan Darlene McCulligh Otis Marilynn Joyce Troup

Chemistry David Christie Bone Robert Wayne Ervin

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Mathematics Daswell Layne Campbell \*William Frank Cicciarelli Marcia Anne Hutchinson William Thomas Reed

Zoology Gerard Joseph Sparling

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# COLLEGE OF SOCIAL SCIENCE

CLARENCE L. WINDER, DEAN

DEGREE OF MASTER OF ARTS

Geography David Melvin Jones James S. Kus Phillip D. Riffe

**Political Science** Daniel G. Berk Roger Alan Brooks Rolland William Holland John Karl Hudzik Robert Fredrick Keller, Jr. Alan Foster Kolb Ronald Dale Kregel Terence Anton Lenio Thomas Hardy McClure Brainard Guy Peters Peter George Renstrom Gary Cecil Shaw

Psychology Obdulia Caridad Becerril Martin Bolt Erla Kaye Bradley Bruce Palmer Burns Stanley Hymie Cohen James Edward Crowder Eileen Gail Eberlein **Robert Peter Gurney** Charles Ernest Kenover H. Robert Laywell Bruce Carl Leibrecht Carolyn Walczynski Mullally Christie Cosby Randolph Robert Allen Ruh A. Dale Shears, Jr. Sandra Jean Woolum Social Science Laxman Subba Trilok Singh Thapa

Sociology Gretchen Margaret Albrecht Dalal Safadi Elias Carlin Paige Holden Velagapudi Veera Prakasa Rao Cody R. Serra-Capdevila Robert Keith Shelly John Charles Thrush

## DEGREE OF MASTER OF LABOR AND INDUSTRIAL RELATIONS

DEGREE OF MASTER IN LANDSCAPE

Thomas Rhodes Montgomery Michael C. Youngs

ARCHITECTURE

DEGREE OF MASTER OF SCIENCE

Police Administration and Public Safety Walter Benjamin Bonner William Wayne Deneau Patricia F. Harris Cheng Cheng Liao Robert Kenneth Ressler Vernon E. Rich Franklin D. Roberson **Ronald Houston Rogers** 

Gary Keith Fisher James Robert Kucera

John Frederick Brocci

Allan David Corcoran

Daniel William Donelin

## COLLEGE OF SOCIAL SCIENCE

DEGREE OF

MASTER OF SOCIAL WORK Patricia June Knowlton

### DEGREE OF

MASTER IN URBAN

PLANNING

Joseph Mendoza Alabanza Gordon Norval Dixon Robert Anthony Duchek

DEGREE OF BACHELOR OF ARTS Anthropology <sup>•</sup>Jill Suzanne Heberling H<sup>•</sup><sup>•</sup>Patricia M. Masters Linda Carol Reiser William Paul Yager

> Geography Thomas Richard Anstine

Political Science Walter Valdis Berzins Douglas Wade Bond Dennis William Cleary

John Wayne Faulkner Donald Howard Goldstein Earl Robert Knight
A. Michael Leffler Eric Rubenstein Marshall James Peter Matora George Daniel McGee
Gordon Gunn Mosley Carl Larner Parks Frederick John Pfeiffer

Frederick John Pfeiffer Steven L. Plavnick Jeffrey Alan Stone H°°Lynn Barbara Streaser °Joan Kay Swartz °Robert William Varano

### Psychology

\*\*Gail Frances Anderson Harry Thomas Angell Karel Lynn Averill

\*\*Jean Kathleen Barbersek Terrance Albert Hagan Linda Sue Leet H<sup>•</sup>Suzanne Kay McCombs Dennis Arlie McGray Donald Walter Opolka Jon Merle Parker Linda Ann Schuler Joel Simmer Douglas M. Smith <sup>•</sup>Lynn Steinhauer Susan Marie St. Pierre <sup>•</sup>Douglas Clark Strohmer Ernest Dick Zaino William Dennis Zock

Social Science Philip Thomas Bakita John Paul Beitler H<sup>•</sup>James Harm Beverwyk Nelson Anthony Brown, Jr. Christopher Battley Duffy Barbara Susan Gattlieb John Martin Grogan Thomas Arthur Hannah Judith Ann Hardy A. Maurice Haynes Dianne Johns Sandra Karen Johnson H<sup>•</sup> \*Katherine Louise Jones Miles Elton Jones Kerry Francis Kirsten Michael Lloyd Kolbay Gerhard Komm

Gerhard Komm Brian Kirk Lawton Leah Rose McCarthy Donald Delbert Parkhurst David Jeffrey Pell H<sup>\*</sup>Donna Kathleen Renz

## Police Administration and Public Safety

Dewey Michael Allen Herbert John Andreen, II Jon Neil Armstrong Harold King Barr Mary Jean Slade \*Curtis Eugene Spencer James E. Spencer, III Mark Samuel Wallach Betty Jane Watson \*Marilyn Sue Young

Social Work \*Marta Anne Elliott Donald Raymond McMillan John Peter Shaft

Sociology Ruth Louise Goslin

DEGREE RECOMMENDED JOINTLY WITH THE COLLEGE OF EDUCATIION

Geography Meredith Wade Sealey

Social Science

Carole Jean Allingham James Ronald Beckstrom \*Kenneth Winslow Burt, II Dorothy Louise Chylinski Janet Gail Gora Patricia Ruth Hendryx \*Thad Anthony McManus Shanna Marie McNaughton Gloria J. Molski Henry William Schoenfeld

Donald Addison Stuchell \*\*James Donald Walters

John Edward Bell Daniel John Branson \*Gary Archille Charette Diane Clark Croff

\*\*Charles Morrison Crowe Richard J. Curtis

DEGREE OF BACHELOR OF SCIENCE

## Harold William Fitzner, Jr.

Anthropology

Landscape Architecture Donald Preston Cato David Elsley Reagan

H Honors College • With Honor •• With High Honor

## COLLEGE OF SOCIAL SCIENCE

DEGREE OF BACHELOR OF SCIENCE Police Administration and Public Safety George Grant Gargett Russell W. Glynn, Jr. Thomas John Harken Lloyd Joseph Hart Rudy Frank Heidenreich William H. Hobbs Glenna Alice Huntley H°°Perry Stephen Mann

- Karen Margaret Mark Burnham Edward Matthews Kevin Roy McGinty Ralph Neil McKinney Kenneth Perry Michael Joan Elizabeth Mick Deborah Arleen Pitman Carol Christine Ryan \*Roger George Stone Richard Llewellyn Thayer, Jr.
- James Howard Weaver John Oliver Wetterholt Peter Richard Wilson
- \*\*Henry Richard Wolf James Walter Zloto

Psychology \*Jan T. Ballew Mark Edward Conklin Paul Arthur Corsa Ronald Lewis Figgins \*Daniel Arthur Friderici J. Albert Gardonier H\*\*Alice Ruth Granskog

Victor Daniel Green Finn Strand Kersgard \*Bruce Ray Marshall

Don David Wilson

 Philip Darryl Oppenheim
 Pohn Anthony Piedmonte, Jr. John Dick Richardson Marion Tenney Rosenau
 H<sup>o</sup> Karen Margaret Smith Joseph Francis Whitaker

> Social Science Paul Chatzka Robert Jackson Cordaro Barbara Sue Ebersole Melvin Farmer, Jr.

Roy E. Krug John Randall Miller Royal Eben Olson David Rudolph Raabe Ronald Dennis Reame Richard Emmons Sharkey Robert Milfred Wilson

DEGREE RECOMMENDED JOINTLY WITH THE COLLEGE OF EDUCATION

Geography \*James Martin Gumper

Social Science Elizabeth Dianne Kett Frank Carl Schemanski

H Honors College \* With Honor \*\* With High Honor

# RESERVE OFFICERS TRAINING CORPS

The following students have completed their ROTC Education at Michigan State University and have received their commissions as reserve officers of the United States Air Force or the United States Army in the branches indicated.

AEROSPACE STUDIES David R. Brownell David J. Chesnut Ryan M. Davis David M. Dudak Johnny Engleman David M. Lemon Garson Page-Wood Donald D. Parkhurst Michael H. Ritchie

MILITARY SCIENCE Armor \*Thomas Arthur Hannah \*Michael Lloyd Kolbay

Corps of Engineers James LeRoy Caswell Infantry David Newell Sinclair \*Richard Carl Timmerman

Medical Service Corps Robert Harrington Kanaga Military Intelligence \*John Willis Arnold Lloyd Joseph Hart

Military Police Corps \*Daniel John Branson

Ordnance Corps Thomas Oliver Robertson

\*Distinguished Graduates