

CIA 13.1
December



COMMENCEMENT 1970

MICHIGAN STATE UNIVERSITY

THE COMMENCEMENT COMMITTEE

HERMAN L. KING, *Chairman*

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MADISON KUHN

DIPLOMAS WILL BE AVAILABLE FOR PICKUP AS FOLLOWS:

Advanced Graduate degreesbeginning Dec. 21 — Room 150 Hannah Administration Building
Master degreesbeginning Dec. 30 — Room 150 Hannah Administration Building
Bachelor degreesbeginning Jan. 8 — Room 50 Hannah Administration Building

Diplomas will be released only to the degree recipients upon presentation of identification.
Diplomas not picked up by Feb. 1 will be mailed.



COMMENCEMENT 1970

Saturday, December 5

University Auditorium, East Lansing

Conferral of Graduate Degrees, 10 A.M.

Conferral of Baccalaureate Degrees, 3 P.M.

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 DON STEVENS, <i>Chairman</i>	<i>Okemos</i>
THE HONORABLE STEPHEN S. NISBET	<i>Fremont</i>
THE HONORABLE FRANK HARTMAN	<i>Flint</i>
THE HONORABLE CLAIR WHITE	<i>Bay City</i>
THE HONORABLE FRANK MERRIMAN, <i>Vice Chairman</i>	<i>Deckerville</i>
THE HONORABLE KENNETH W. THOMPSON	<i>East Lansing</i>
THE HONORABLE WARREN M. HUFF	<i>Plymouth</i>
THE HONORABLE BLANCHE MARTIN	<i>East Lansing</i>

CLIFTON R. WHARTON, JR., <i>Ex Officio, President</i>	<i>East Lansing</i>
JACK BRESLIN, <i>Secretary</i>	<i>East Lansing</i>
ROGER WILKINSON, <i>Treasurer</i>	<i>East Lansing</i>

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 have long, pointed sleeves. Those worn by masters 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 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. Arts 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, Packaging*Russet*
COLLEGE OF ARTS
AND LETTERS*White*
Music*Pink*
Philosophy*Navy Blue*
COLLEGE OF
BUSINESS*Drab*
Economics*Copper*
COLLEGE OF
COMMUNICATION ARTS*Royal Blue*
Journalism*Crimson*
Speech*Silver Gray*
COLLEGE OF EDUCATION*Light Blue*
COLLEGE OF ENGINEERING*Orange*

COLLEGE OF
HOME ECONOMICS*Maroon*
COLLEGE OF
HUMAN MEDICINE*Green*
JAMES MADISON COLLEGE*Citron*
JUSTIN MORRILL COLLEGE*White*
LYMAN BRIGGS
COLLEGE*Golden Yellow*
COLLEGE OF
NATURAL SCIENCE*Golden Yellow*
Nursing*Apricot*
COLLEGE OF
OSTEOPATHIC MEDICINE*Green*
COLLEGE OF
SOCIAL SCIENCE*Citron*
COLLEGE OF
VETERINARY MEDICINE*Dark Gray*

ORDER OF CEREMONIES

Graduate Degrees

PROCESSIONAL

PROCESSION OF THE NOBLES.....*Rimsky-Korsakov*
MARCH from "LOVE OF THE THREE ORANGES".....*Prokofieff*
MSU Symphonic Band, DR. KENNETH BLOOMQUIST, *Director*

AMERICA.....*Smith*

The Band and Audience

PRAYER

THE REVEREND WILLIAM J. McKEON
Chaplain, Cristo Rey Community Center

COMMENTS

DR. LAWRENCE VON TERSCH
Dean, College of Engineering, Michigan State University

CONFERRING OF DEGREES

CLIFTON R. WHARTON, JR., M.A., Ph.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.

The Band and Audience

PRAYER

THE REVEREND FATHER McKEON

RECESSIONAL

TRIUMPHAL MARCH from "AIDA".....*Verdi*

The escorts for the procession are members of Mortar Board, Tower Guard and Alpha Lambda Delta, honor societies for women.

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

ORDER OF CEREMONIES

Baccalaureate Degrees

PROCESSIONAL

PROCESSION OF THE NOBLES.....*Rimsky-Korsakov*
MARCH from "LOVE OF THE THREE ORANGES".....*Prokofieff*
MSU Symphonic Band, DR. KENNETH BLOOMQUIST, *Director*

AMERICA.....*Smith*

The Band and Audience

PRAYER

THE REVEREND WILLIAM J. McKEON
Chaplain, Cristo Rey Community Center

ADDRESS

DURWARD B. VARNER, M.S.
Chancellor of the University of Nebraska

OVERTURE

FANTASY ON MSU SONGS.....*Curnow*

CONFERRING OF DEGREES

CLIFTON R. WHARTON, JR., M.A., Ph.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
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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 116th 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 16 colleges — Agriculture and Natural Resources, Arts and Letters, Business, Communication Arts, Education, Engineering, Human Ecology, Human Medicine, James Madison, Justin S. Morrill, Lyman J. Briggs, Natural Science, Osteopathic Medicine, Social Science, Veterinary Medicine and the University College. 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. Michigan State University also is a prominent sponsor of the National Merit Scholarship Program, an unusually select group of scholars.

One of the 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 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 recently at MSU by the establishment of the Justin S. Morrill College, which offers a limited enrollment liberal education program with an international emphasis. The concept was expanded 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, more than 40,000 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 81 foreign countries.

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. Approximately 2,000 individual projects are in progress. The University's research tools include the Control Data 3600 and 6500 Computers 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 has 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.

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 DEGREES

RAY W. HERRICK

Your progress from a youthful apprentice toolmaker, working for five cents an hour, to the directorship of the Tecumseh Products Company, one of Michigan's leading corporations, has been a living example of the achievements which are possible for men of great faith and energy. Because of your imaginative industrial philosophy and your social responsibility, you have pioneered in developing an incentive pay system based on the worker's skill and dedication to his task. You have displayed a remarkable talent for resolving complex production problems by dealing directly with employees at the workbench level. Your successful endeavors in industry have been enriched by your many contributions to civic and educational institutions in Michigan, including schools, libraries, churches, and facilities for handicapped children. This University's Hidden Lake Gardens, which ranks among the nation's most renowned arboretums, is one of the symbols of your influence and generosity. Because of your dedication to the advancement of American industry and to the economic and civic welfare of your fellow citizens, Michigan State University is pleased to grant you the degree of Doctor of Engineering.

FOSTER E. MOHRHARDT

Since your graduation from Michigan State University four decades ago, you have pursued a distinguished career as a librarian and administrator. Because of your intelligent application of your professional knowledge you have made important contributions to the advancement of library science. For these accomplishments you have received signal honors and awards from public institutions, and you have been a valued consultant and advisor to libraries and professional associations in many parts of the world. During your long tenure as Director of the U.S. Department of Agriculture Library, you carried out extensive responsibilities with vigor and meaningful purpose. Those same exemplary qualities of leadership identify your present success as Program Officer of the Council of Library Resources. Because of your dedication to the dissemination of knowledge and the great credit which you have brought to yourself, to this institution and to your profession, Michigan State University is pleased to grant you the degree of Doctor of Letters.

HONORARY DEGREES

DURWARD B. VARNER

Both as a teacher and administrator you have given impressive evidence of your devotion to American education. Because of your vision and integrity, you have succeeded in a broad range of academic responsibilities: as Professor of Agriculture at Michigan State University, Director of its Cooperative Extension Service, Director of its Continuing Education Service, Vice President for Off-Campus Education, and as Chancellor of Oakland University. A deep concern with human knowledge and truth has illuminated these endeavors. And now that you have become Chancellor of the University of Nebraska, higher education in Michigan — and this institution especially — will miss the force and energy of your personality; your keen, incisive wit; your rare quality of leadership; and your penetrating insights into the educational and social process. Besides your academic tasks, you have given much time and effort to civic and cultural projects, especially to the advancement of the arts. Because of your many contributions to the development of this institution and your continuing dedication to human values in the modern world, Michigan State University is pleased to grant you the degree of Doctor of Laws.

GILBERT F. WHITE

Your career as a geographer, educator and administrator has been an outstanding one. Your diligent research into the conservation and utilization of land and water resources has brought you international recognition as a leading expert in that field. As a consultant on natural resources planning and relief administration, you have left your mark upon the life and environment of many people in America, Africa, Europe and Asia. This eminence in your special field has been acclaimed by your colleagues, who have entrusted you with the leadership of professional organizations and enterprises, leading to your present position as Director of the Institute of Behavioral Science at the University of Colorado. Your many years of service as President of Haverford College and as a teacher at the University of Chicago and elsewhere reflect the initiative, wisdom and creative vision that are characteristic of all your undertakings. Because of your significant contributions to American higher education and to man's knowledge about himself and his environment, Michigan State University is pleased to grant you the degree of Doctor of Laws.

DISTINGUISHED ALUMNI AWARD

JAMES F. STERBA

Class of 1966. Although he came to Michigan State University from the small town of Owosso in Central Michigan, Jim Sterba, in less than five years after graduation, has seen much of the world as a foreign correspondent for the *New York Times*. And as a correspondent in *The Times* Saigon Bureau, Sterba, at the age of 27, has distinguished himself in his profession and as a member of this elite corps of journalists. While a student at Michigan State, Mr. Sterba worked as a reporter for the *State News* where he demonstrated early competence as a newsman and subsequently assumed a key editorial post. As a student he also covered the University for the *Detroit Free Press*. After graduation, Mr. Sterba joined the editorial staff of the *Evening Star* in Washington, D. C. and one year later left for a position as assistant to James Reston, chief of the *New York Times* Washington Bureau. After a year in Washington with *The Times*, Mr. Sterba was assigned to the New York office to assist in coverage of the national political convention and after the 1968 presidential election he was assigned to the Metropolitan Desk in New York. In June of 1969, Mr. Sterba was sent to *The Times* Saigon Bureau to assist in coverage of the war in Vietnam. Beginning in January of 1971, he will assume new duties as *The Times* correspondent in Indonesia.

THE CANDIDATES FOR DEGREES

1970 CLASS ROSTER

This includes the names of candidates for degrees as of the close of the 1970 Fall term, as well as the names of the recipients of the Doctoral and Master degrees at the close of the 1970 Summer term.

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

SCHOOL FOR ADVANCED GRADUATE STUDIES

MILTON E. MUELDER, DEAN

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970

FRANCIS M. ABRAHAM, Ph.D.

Diploma in Rural Services, Post Graduate Diploma in Rural Sociology and Community Development, Rural Institute, Gandhigram.
Sociology. Major Professor: Charles P. Loomis, Professor.
Thesis: The Dynamics of Leadership in Village India.

ERNEST LOYD ADAMS, Ph.D.

B.S.E., Abilene Christian College; M.A., Michigan State University.
Education. Major Professor: Byron H. Van Roekel, Professor.
Thesis: Influence of Meaningfulness and Familiarization Training on Basic Sight Vocabulary Learning with First-Graders.

JANET STECKELBERG ADAMS, Ph.D.

B.A., University of Nebraska; M.A., Michigan State University.
Political Science. Major Professor: Ellen Mickiewicz, Associate Professor.
Thesis: Public Control Systems in the USSR: The People's Control Committee.

JEAN TOTH ALLEN, Ph.D.

M.S., Michigan State University.
Biophysics. Major Professor: Barnett Rosenberg, Professor.
Thesis: Distribution and Histopathological Effects of Cis-Platinum (II) Diamminodichloride on Non-Tumored and Tumored (Sarcoma 180) Swiss White Mice.

CHARLES ROBERT ALMLI, Ph.D.

B.S., M.S., Michigan State University.
Psychology. Major Professor: Glenn I. Hatton, Associate Professor.
Thesis: Thirst Motivated Behavior: Specification of the Adequate Internal Stimulus.

DENNIS LYLE ANDERSON, Ph.D.

B.S., M.S., University of Minnesota.
Education. Major Professor: Joe L. Byers, Professor.
Thesis: Retroactive Interference in Prose Learning as a Function of Similarity, Degree of Learning, and Instructions.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

THOMAS WESLEY ARCH, Ph.D.

B.A., M.A., Western Michigan University.
Education. Major Professor: Charles A. Blackman, Professor.
Thesis: The Value-Oriented Role of the Educational Change Agent.

GARY JAMES ATCHISON, Ph.D.

B.S., Michigan State University; M.S., Iowa State University.
Fisheries and Wildlife. Major Professor: Howard E. Johnson, Associate Professor.
Thesis: Lipid and DDT Dynamics and Developing Brook Trout Eggs and Fry.

GEORGIANNE RUTH BAKER, Ph.D.

B.S., Marygrove College; M.S., The Ohio State University.
Home Management. Major Professor: Beatrice Paolucci, Professor.
Thesis: Patterning of Family Resources for Educability: Conceptualization and Measurement in Costa Rican Families.

JOHN BALDWIN, Ph.D.

B.M.E., University of Wichita; M.M.E., Wichita State University.
Music. Major Professor: Paul O. Harder, Professor.
Thesis: Some Acoustical Properties of Triangles and Cymbals and Their Relation to Performance Practices.

LAURENCE DAVID BARTLETT, Ph.D.

B.A., University of Wales; M.A., University of Buffalo.
English. Major Professor: Lawrence E. Babb, Professor.
Thesis: The Development of Congreve the Dramatist in Relation to Restoration and Eighteenth-Century Comedy.

DAVID JAMES FREDERICK BEATTY, Ph.D.

B.A., University of Toronto; M.A., Michigan State University.
Communication. Major Professor: Gerald R. Miller, Professor.
Thesis: An Approach to Conflict Resolution Using the Dialogue as an Intervention Mechanism.

WILLIAM SAMUEL BEAVERS, Ph.D.

B.A., Drake University; M.Ed., University of Missouri.
Education. Major Professor: Norman R. Stewart, Professor.
Thesis: The Comparative Effect of Systematic Counseling and Insight-Relationship Counseling on the Task-Orientated Behaviors of Seventh Graders.

JOSEPH EDWARD BECHARD, Ph.D.

B.S., Michigan State University; M.Ed., Wayne State University.
Education. Major Professor: John H. Suehr, Associate Professor.
Thesis: The College of Education at Michigan State University as an Organization: A Survey of the Perceptions of Its Students, Faculty, and Administrators.

JULIETA OVEJERA BELO, Ph.D.

B.S.A., University of the Philippines; M.S., North Dakota State University.
Soil Science. Major Professor: Eugene C. Doll, Professor.
Thesis: Determination of Total Carbon by Dry Combustion and Its Relation to Forms of Soil Nitrogen as Measured in the Laboratory and in the Greenhouse.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

RICHARD ARTHUR BENSON, Ph.D.

B.S., M.S., University of Illinois.
Agricultural Economics. Major Professor: John R. Brake, Professor.
Thesis: A Comparative Analysis of Financing Requirements of Selected Types of Farm Operation in the Eastern Corn Belt for 1980.

HASSO CHELLARAM BHATTIA, Ph.D.

B.S., M.S., University of Delhi.
Mathematics. Major Professor: W. Eugene Deskins, Professor.
Thesis: A Generalized Frattini Subgroup of a Finite Group.

ARTHUR WILLIAM BIDDLE, Ph.D.

B.A., University of Connecticut; M.A., Trinity College.
English. Major Professor: Clyde E. Henson, Professor.
Thesis: The Emerging Consciousness: A Study of the Development of the Centre of Consciousness in the Early Novels of Henry James.

CHARLES G. BOLLMAN, Ph.D.

M.S., Millikin University; B.S., Concordia Teachers College.
Education. Major Professor: Charles F. Schuller, Professor.
Thesis: The Effect of Large-Screen, Multi-Image Display on Evaluative Meaning.

MARY-CLARE BOROUGHS, Ph.D.

A.B., Smith College; M.A., Columbia University; M.A., Michigan State University.
Psychology. Major Professor: Arthur A. Seagull, Associate Professor.
Thesis: The Stimulation of Verbal Behavior in Culturally Disadvantaged Three-year-olds Through a Program of Mother-Child Interaction at Home Using Children's Books.

JUDITH F. BORUS, Ph.D.

B.A., M.A., University of Connecticut.
Audiology and Speech Sciences. Major Professor: William F. Rintellmann, Professor.
Thesis: Effects of Cold Air Temperature on the Human Peripheral Auditory System.

CHARLES JON BRAINERD, Ph.D.

B.S., M.A., Michigan State University.
Psychology. Major Professor: Ellen A. Strommen, Assistant Professor.
Thesis: The Construction of the Formal Operations of Implication-Reasoning and Proportionality in Children and Adolescents.

RICHARD P. BRANDT, Ph.D.

B.A., Houghton College; M.A., Eastern Michigan University.
Education. Major Professor: Van C. Johnson, Professor.
Thesis: The Relationship of Selected Preadmission Data to Graduation, Measures of Graduate Performance, and Department Profiles of College of Education Master's Students at Michigan State University.

SALLY ANN BRICKNER, O.S.F., Ph.D.

B.S., St. Norbert College; M.A., Michigan State University.
Education. Major Professor: W. Robert Houston, Professor.
Thesis: Observed Classroom Behaviors and Personality Types of 178 Beginning Teachers.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- BARBARA MARIE BRODIE, Ph.D. B.S.N., Loyola University; M.S.N., Boston University.
Psychology. Major Professor: Don E. Hamachek, Professor.
Thesis: An Explorative Study of the Perceptions of Healthy Children Toward Illness.
- BARRY STEWART BROWN, Ph.D. B.S., Brooklyn College; M.A., Michigan State University.
Education. Major Professor: Wayne D. Van Huss, Professor.
Thesis: The Effects of Exercise Upon Rat Brain Catecholamines.
- RICHARD WANLESS BRUNSON, SR., Ph.D. B.S., U.S. Military Academy; M.B.A., Babson Institute of Business Administration.
Business Administration. (Management). Major Professor: Frederic R. Wickert, Professor.
Thesis: A Behavioral Case Study of a Mini-Conglomerate.
- BARBARA EVERITT BRYANT, Ph.D. B.A., Cornell University; M.A., Michigan State University.
Communication. Major Professor: Verling C. Troidahl, Professor.
Thesis: Message Manipulations in Communication of a Complex Political Issue.
- ANDREW RAYMOND CARLSON, Ph.D. B.A., M.A., Western Michigan University.
History. Major Professor: Vernon Lidtke, Professor.
Thesis: Anarchism in Germany: The Early Movement.
- KARL CHMELOWITZ CARTER, Ph.D. B.A., Missouri Valley College; M.S., Alfred University.
Education. Major Professor: Julian R. Brandou, Professor.
Thesis: A Historical Study of the Evolution of the Objectives of the National Science Foundation Teacher Training Programs, as Exemplified Specifically by the Academic Year Institute Programs in Science.
- EDDIE SU-EN CHAO, Ph.D. B.S., Chung-Hsing University; M.S. University of Hawaii.
Botany and Plant Pathology. Major Professor: John G. Scandalios, Assistant Professor.
Thesis: Biochemical Genetics and Developmental Studies of Starch-Degrading Enzymes in Maize.
- CHING JER CHERN, Ph.D. B.S., National Taiwan University.
Biochemistry. Major Professor: Allan J. Morris, Associate Professor.
Thesis: A Nucleoside Triphosphate Pyrophosphohydrolase from Red Blood Cells of the Rabbit.
- HAROLD ROSS CHERRY, Ph.D. B.A., Huntington College; M.A., Western Michigan University.
Speech and Theatre. Major Professor: Kenneth G. Hance, Professor.
Thesis: A Rhetorical Analysis of the Preaching of Clovis Gillham Chappell.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

LORIS OHANNES CHOBANIAN, Ph.D.

B.M., M.M., Louisiana State University.
Music. Major Professor: H. Owen Reed, Professor.
Thesis: Concerto for Guitar and Orchestra.

VAL RIGBY CHRISTENSEN, Ph.D.

B.S., M.S., Utah State University
Education. Major Professor: Eldon R. Nonnamaker, Professor.
Thesis: A Survey and Evaluation of Existing Student Conduct Codes and Regulations in Selected Four-Year Institutions of Higher Learning.

MYRON DALE COLBER, Ph.D.

B.S., Greenville College; M.M., Indiana University.
Music. Major Professor: Robert Sidnell, Associate Professor.
Thesis: A Study of Music: Application of a Hierarchical Model in the Learning of Selected Harmonic Elements.

STEVEN G. COLE, Ph.D.

B.A., Wichita State University; M.A., Michigan State University.
Psychology. Major Professor: James L. Phillips, Associate Professor.
Thesis: Uelative Conflict: The Effects of Payoff, Distribution of Relative Strengths, and Alliance Situations on the Extent of Cooperation.

THOMAS GEORGE CONNELLY, Ph.D.

B.S., Monmouth College.
Zoology. Major Professor: Charles S. Thornton, Professor.
Thesis: Light and Electron Microscopic Analysis of Normal and Transplanted Pituitary of the Mexican Axolotl Ambystoma Mexicanum.

DOUGLAS MELVIN CRAPO, Ph.D.

B.P.E., University of Alberta; M.S., Michigan State University
Resource Development. Major Professor: Daniel E. Chappelle, Associate Professor.
Thesis: Recreational Activity Choice and Weather: The Significance of Various Weather Perceptions in Influencing Preference for Selected Recreational Activities in Michigan State Parks.

GARY MICHAEL CROOCH, Ph.D.

B.S., M.S., Oklahoma State University.
Business Administration (Accounting). Major Professor: Herbert E. Miller, Professor.
Thesis: An Investigation of Investors' Financial Statement Knowledge.

JAMES BURKE CROSS, Ph.D.

B.S., University of Dayton.
Chemistry. Major Professor: William C. McHarris, Associate Professor.
Thesis: The Electron Capture Decay Schemes of Bi^{203} and Bi^{204} .

JAMES EDWARD CROWDER, Ph.D.

B.A., Wayne State University; M.A., Michigan State University.
Psychology. Major Professor: William J. Mueller, Professor.
Thesis: Transference, Transference Dissipation, and Identification in Successful Vs. Unsuccessful Psychotherapy.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- HERBERT WAYLAND CUMMINGS, Ph.D. B.A., Central Michigan University; M.A., Michigan State University. Communication. Major Professor: Erwin P. Bettinghaus, Professor.
Thesis: Specified Cognitive Structures and Their Effects on Language Encoding Behaviors.
- JOHN WILLIAM DAHM, Ph.D. A.B., Calvin College; M.A., Western Michigan University. Education. Major Professor: Richard G. Johnson, Associate Professor.
Thesis: The Effects of Modeling and Information — Only on Counseling Self-Referral Among Middle School Students.
- TIMOTHY GRAY DAVIES, Ph.D. B.A., Adrian College; M.A., Eastern Michigan University. Education. Major Professor: Max R. Raines, Professor.
Thesis: Proposed Behavioral Competencies for Members of the Junior College Presidential Cabinet.
- JACQUELINE ANNE DEEB, Ph.D. B.S., Aquinas College; M.A., Michigan State University. Education. Major Professor: Dale V. Alam, Associate Professor.
Thesis: A Study of the Academic Self-Concept of Pupils in Selected Graded Schools and Selected Non-Graded Schools.
- RICHARD PHILLIP DeSANTIS, Ph.D. B.S., Clarion State College; M.S., Michigan State University. Education. Major Professor: Robert O. Nolan, Professor.
Thesis: A Descriptive Study of Strategies Used in Three Dissimilar Communication Campaigns for the Purpose of Making Generalized Applications to the Field of Traffic Safety.
- JEAN D. DEUPREE, Ph.D. B.S., Ferris State College. Biochemistry. Major Professor: Willis A. Wood, Professor.
Thesis: An Analysis of the Mechanism of L-Ribulose-5-Phosphate 4-Epimerase from *Aerobacter Aerogenes*.
- CHARLES RICHARD DIMINNIE, Ph.D. B.S., St. Bonaventure University; M.S., Michigan State University. Mathematics. Major Professor: Clifford E. Weil, Associate Professor.
Thesis: An Application of the Process of Regularization to the Analysis of Distribution.
- JEROME ANTHONY DOMINIC, Ph.D. B.A., M.S., Michigan State University. Pharmacology. Major Professor: Kenneth E. Moore, Professor.
Thesis: The Acute and Chronic Effects of α -Methyltyrosine and α -Methyldopa on Behavior and Brain Catecholamine Dynamics.
- JOSEPH RAYMOND DOMINICK, Ph.D. B.S., University of Illinois; M.A., Michigan State University. Communication. Major Professor: Bradley S. Greenberg, Associate Professor.
Thesis: The Influence of Social Class, the Family, and Exposure to Television Violence on the Socialization of Aggression.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

CHARLES ARTHUR DRAKE, Ph.D.

B.S., Brigham Young University; M.A., University of Maine.
Sociology. Major Professor: Philip M. Marcus, Associate Professor.
Thesis: Management, Technology and Behavior of Work Groups.

FREDERICK NICHOLAS EBBECK, Ph.D.

M.A., Michigan State University; A.Mus.A., Australia-Conservatorium of Music; L.T.C.L., Australia-Trinity College of Music; Diploma in Teaching, Newcastle Teachers' College.
Education. Major Professor: Troy L. Stearns, Professor.
Thesis: An Examination of Selected Problems Associated with Primary Teacher Education in Papua and New Guinea Leading to Suggestions for Possible Redirection in Curriculum Planning.

JERRY BRUCE ECKERT, Ph.D.

B.S., University of Arizona; M.A., Stanford University.
Agricultural Economics. Major Professor: Laurence Witt, Professor.
Thesis: The Impact of Dwarf Wheats on Resource Productivity in West Pakistan's Punjab.

LOUIS RAYMOND EECKHOUDT, Ph.D.

Licence, Faculte Universitaire Catholique; Licence, Universite Catholique.
Economics. Major Professor: Anthony Koo, Professor.
Thesis: Money and Wealth in Open and Interdependent Economies.

MARIE-THERÈSE ELIE, Ph.D.

A.B., M.A., University of Montreal.
Education. Major Professor: Louis Romano, Associate Professor.
Thesis: A Comparative Study of Middle School and Junior High School Students in Terms of Socio-Emotional Problems, Self-Concept of Ability to Learn, Creative Thinking Ability, and Physical Fitness and Health.

WALLACE MALCOLM ELTON, Ph.D.

B.A., Dartmouth College; M.A., Michigan State University.
Geography. Major Professor: Jay R. Harman, Assistant Professor.
Thesis: Forest and Lake Breeze Patterns and the La Porte, Indiana, Rainfall Anomaly.

HARRIETT ELENOR EMERY, Ph.D.

A.B., Eastern Michigan University; M.A., M.A., University of Michigan.
Education. Major Professor: T. Wayne Taylor, Professor.
Thesis: Mathematics for Prospective Elementary Teachers in a Community College: A Comparison of Audio-Tutorial and Conventional Teaching Materials and Modes.

RICHARD EARL EPPLEY, Ph.D.

B.S., North Central College.
Chemistry. Major Professor: William C. McHarris, Associate Professor.
Thesis: Nuclear Spectroscopic Studies of Neutron-Deficient, Odd-Mass Rare Earths Near the N=82 Closed Shell.

KAI L. ERICKSON, Ph.D.

B.A., Central Michigan University; M.A., University of Michigan; Ed.S., Central Michigan University.
Education. Major Professor: Stanley E. Hecker, Professor.
Thesis: A Study of Grievance Arbitration Awards in Michigan Public Schools.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- CESAR A. ESCOBAR PAEZ, Ph.D. B.S., National University of Columbia; M.S., Michigan State University. Botany and Plant Pathology. Major Professor: Everett S. Beneke, Professor.
Thesis: The Ecological and Physiological Studies of Casing Soil Layer in Relation to Fruit Body Development in *Agaricus Bisporus* (Lange) Sing.
- BONITA GREEN FAHRNER, Ph.D. B.A., University of Michigan; M.A., Michigan State University. Psychology. Major Professor: Norman Abeles, Professor.
Thesis: Perspectives on Psychotherapy: Drive Expression and Self-Esteem as Related to Outcome.
- DOROTHY C. FERGUSON, Ph.D. B.A., M.A., State University of New York. Education. Major Professor: Elizabeth H. Rusk, Professor.
Thesis: The Teacher as a Member of a School Staff and the Profession: A Synthesis of Current Thought.
- THOMAS ENRICO FERRARI, Ph.D. B.S., M.S., North Carolina State University. Horticulture. Major Professor: August A. DeHertogh, Associate Professor.
Thesis: Control of Nitrate and Nitrite Reduction in Barley Aleurone Layers.
- HANS FREDERICK FETTING, Ph.D. A.B., A.M., University of Michigan. English. Major Professor: William W. Heist, Professor.
Thesis: A Study in Phylogenetic Change: Old English /d/ » Modern English /ð/ Reexamined.
- LOIS JEAN FIEDLER, Ph.D. B.S., University of Wisconsin; M.S., Purdue University. Education. Major Professor: Norman R. Stewart, Professor.
Thesis: The Comparative Effect of Two Systematic Counselor In-service Training Treatments Upon the Information-Seeking Behaviors of Clients.
- MICHAEL HOWARD FIGLER, Ph.D. B.S., University of Wisconsin; M.A., Michigan State University. Psychology. Major Professor: Stanley C. Ratner, Professor.
Thesis: The Intensity, Habituation, and Retention of Habituation of the Threat Display in Male *Betta Splendens* (Regan) as a Function of Eliciting Stimuli.
- NORMAN ALLEN FISHEL, Ph.D. B.S., M.S., Michigan State University. Chemistry. Major Professor: Harry A. Eick, Professor.
Thesis: A Structural and Vaporization Examination of Ytterbium(II) Chloride and Ytterbium(III) Oxidechloride.
- WILLIAM RILEY FORCE, Ph.D. B.A., Western Michigan University; M.A., Michigan State University. Education. Major Professor: Charles A. Blackman, Professor.
Thesis: System Effects on Beginning Teachers in Innovative and Non-Innovative Schools.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

WILLIAM CLARK FORD, Ph.D.

B.S., M.A., Appalachian State Teachers College.
Education. Major Professor: Dale V. Alam, Associate Professor.
Thesis: The Secretary to the Public School Principal: A Job and Personal Profile Analysis.

GAROLD F. FRITZ, Ph.D.

B.S., University of Toledo; M.S., Michigan State University.
Physics. Major Professor: Gerald L. Pollack, Professor.
Thesis: Coupling Between Pressure and Temperature Waves in Liquid Helium.

WILLIAM EURENSTOFF GARDNER, Ph.D.

B.A., Morehouse College; M.A., New York University.
Education. Major Professor: James W. Costar, Professor.
Thesis: A Study of How Selected Personal Characteristics of Counselors are Related to their Effectiveness as Seen by Black College Students.

JOSEPH ALEXANDER GASTON, Ph.D.

A.B., Johnson C. Smith University; M.A., University of Denver.
Education. Major Professor: Eldon R. Nonnamaker, Professor.
Thesis: A Comparison of the Personality Characteristics of Northern and Midwestern Urban Afro-American Freshmen, Southern Town and Rural Afro-American Freshmen, and Southern Afro-American College Student Personnel Staff.

GLEN KAY GERARD, Ph.D.

B.A., Michigan State University; M.A., University of Michigan.
Education. Major Professor: John H. Suehr, Associate Professor.
Thesis: An Analysis of the Relationship Between Open Systems and Innovative High Schools.

WILLARD MARION GERSBACHER, JR., Ph.D.

A.B., Grinnell College; M.S., Michigan State University.
Physics. Major Professor: Truman O. Woodruff, Professor.
Thesis: Energy Bands, Surface States, and Resonant Transmission of Electrons in Finite One-Dimensional Crystals.

GERALD MILLARD GILLMORE, Ph.D.

B.A., Wheaton College; M.A., Michigan State University.
Psychology. Major Professor: John E. Hunter, Assistant Professor.
Thesis: Legalism, Antinomianism, Situationalism; Three Moral Decision-Making Orientations.

LOUIS ANTHONY GOLOB, JR., Ph.D.

B.F.A., M.A., Michigan State University.
Education. Major Professor: Dale V. Alam, Associate Professor.
Thesis: An Examination of the Attitudes of a Secondary School Staff Concerning Certain Educational School Problems.

ITZHAK GOTLIEB, Ph.D.

B.S., M.S., Technion-Israel Institute of Technology.
Chemical Engineering. Major Professor: George A. Coulman, Associate Professor.
Thesis: Mathematical Modeling of Supercritical Once Through Boilers.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- ROBERT JAMES GREENE, Ph.D. B.A., M.A., Michigan State University.
Psychology. Major Professor: Joseph Reyher, Professor.
Thesis: Stimulus Tolerance in Hypnotic Analgesic and Imagination States.
- MARILYN JEAN GREENLAW, Ph.D. B.A., M.A., Stetson University.
Education. Major Professor: Patricia J. Cianciolo, Professor.
Thesis: A Study of the Impact of Technology on Human Values as Reflected in Modern Science Fiction for Children.
- BARNEY GREENSPAN, Ph.D. B.A., M.S., California State College.
Education. Major Professor: John E. Jordan, Professor.
Thesis: Differences in Self-Concept Identification by a Schizophrenic and Non-Schizophrenic Prison Population.
- THOMAS JOHN GRGURICH, Ph.D. A.B., University of Pittsburgh; M.S., Syracuse University.
Education. Major Professor: John M. Mason, Professor.
Thesis: An Evaluation of the Achievement of General Course Objectives for a Secondary Biology Program.
- WILLIAM HOWARD HAAS, Ph.D. B.A., M.A., Michigan State University.
Audiology and Speech Sciences. Major Professor: Herbert J. Oyer, Professor.
Thesis: Vibrotactile Reception of Spoken English Phonemes.
- DAVID L. HAGER, Ph.D. B.S., M.A., Michigan State University.
Education. Major Professor: Arthur M. Vener, Professor.
Thesis: Adolescent Drug Use in Middle America: Social-Psychological Correlates.
- ROBERT ANDRE HALLE, Ph.D. B.S., M.A., Eastern Michigan University.
Education. Major Professor: Calhoun C. Collier, Professor.
Thesis: The Effects of a Teaching Resource Unit on the Attitudes of Segregated White Fifth-Grade Students.
- M. DALE HANNAH, Ph.D. B.A., Andrews University; M.A., Michigan State University.
Speech and Theatre. Major Professor: Kenneth G. Hance, Professor.
Thesis: A Study of the Lines of Thought in the Speaking of Arthur L. Bietz, Minister-Psychologist.
- DONALD K. HANZEK, Ph.D. B.A., M.A., Michigan State University
English. Major Professor: C. David Mead, Professor.
Thesis: Irwin Russell.
- HAROLD CECIL HARDER, Ph.D. B.S., Alma College; M.A., Michigan State University.
Biophysics. Major Professor: Barnett Rosenberg, Professor.
Thesis: Molecular Effects of Tumor-Inhibiting Platinum Compounds in Mammalian Cells *In Vitro*: Investigations into Their Possible Mechanisms of Action.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- PATRICK JAMES HARRISON, Ph.D. B.S., M.S., Stout State University.
Education. Major Professor: Paul W. F. Witt, Professor.
Thesis: The Relationship of Sex Role Identity Attention and Readiness to Selected Presentation Modes in Individualized Instruction.
- GORDON MAX HART, Jr., Ph.D. B.S., Ohio University; M.S., Bowling Green State University.
Education. Major Professor: James W. Costar, Professor.
Thesis: Development of Open-mindedness Through Written Exercises.
- DENNIS CHARLES HASS, Ph.D. B.A., University of Maine; M.S., Michigan State University.
Mathematics. Major Professor: Patrick H. Doyle, Professor.
Thesis: The Ends of a Product Manifold.
- JAMES EDGAR HEDGEBETH, Ph.D. B.A., M.A., North Carolina College.
Education. Major Professor: Robert L. Green, Professor.
Thesis: The Relationship of Self and Academic Attitudes and Academic Achievement of Negro and White Students to School Racial Composition: An Exploratory Study.
- RICHARD IRVING HENDRA, Ph.D. B.S., M.A., Northern Michigan University.
Education. Major Professor: David Smith, Associate Professor.
Thesis: An Assessment of the Motivation and Achievement of Michigan Reservation Indian High School Students and Michigan Caucasian High School Students.
- WILLIAM LEE HIGHTOWER, Ph.D. B.A., Kalamazoo College; M.S., Michigan State University.
Mathematics. Major Professor: Joseph A. Adney, Professor.
Thesis: Some Subgroups of the Automorphism Group of a Finite Abelian Group.
- GERALD HERMAN HIRSCH, Ph.D. B.S., M.S., University of Alberta.
Pharmacology. Major Professor: Jerry B. Hook, Assistant Professor.
Thesis: Development of Renal Organic Acid Transport; Substrate Stimulation by Penicillin and Other Compounds.
- ROBERT HENRY HOEXTER, Ph.D. B.S., M.A., University of Michigan.
Education. Major Professor: George R. Myers, Professor.
Thesis: A Definition and Examination of the Role of School Principals in Certain Aspects of Student Teaching.
- GLEN RICHARD HOFF, Ph.D. B.S., Harvey Mudd College; M.S., Michigan State University.
Chemistry. Major Professor: Carl H. Brubaker, Professor.
Thesis: The Preparation and Characterization of Some Mixed-Ligand Complexes of Titanium(III).
- ARNOLD R. HOFFMAN, Ph.D. B.A., M.A., University of Kansas.
English. Major Professor: Joseph J. Waldmeir, Professor.
Thesis: The Sense of Place: Peter De Vries, J. F. Powers, and Flannery O'Connor.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- WENDELL FEY HOFMAN, Ph.D. B.S., M.A., Western Michigan University.
Physiology. Major Professor: Gail D. Riegle, Associate Professor.
Thesis: Acute Thermal and Cardiorespiratory Responses to Tranquilization and Electroanesthesia in Sheep.
- JAMES DONALD HOLDEMAN, Ph.D. B.S., M.S., University of Michigan.
Mechanical Engineering. Major Professor: John F. Foss, Associate Professor.
Thesis: The Initiation, Development, and Decay of the Secondary Flow in an Incompressible Turbulent Bounded Jet.
- JOHN THOMAS HOUDEK, Ph.D. B.A., M.A., Michigan State University.
History. Major Professor: Harry J. Brown, Professor.
Thesis: James A. Garfield and Rutherford B. Hayes: A Study in State and National Politics.
- FREDERICK CHARLES HOWE, Ph.D. B.A., M.A., Michigan State University.
Education. Major Professor: Robert L. Green, Professor.
Thesis: Teacher Perceptions Toward the Learning Ability of Students from Differing Racial and Socio-Economic Backgrounds.
- HUGH ANTHONY HOYT, Ph.D. B.B.A., Eastern Michigan University; M.B.A., Michigan State University.
Business Administration (Accounting). Major Professor: James Don Edwards, Professor.
Thesis: The Relative Predictive Capacity of Two Bank Earnings Measures: An Empirical Evaluation.
- SU-CHAN HSU, Ph.D. B.S., Taiwan Provincial Chung Hsing University; M.S., Michigan State University.
Botany and Plant Pathology. Major Professor: John L. Lockwood, Professor.
Thesis: Sensitivity of Fungal Hyphae to Soil Fungistasis.
- HAROLD E. B. HUMPHREY, Ph.D. B.S., M.S., University of Michigan.
Microbiology and Public Health. Major Professor: Philipp Gerhardt, Professor.
Thesis: Dialysis Culture of Bacteria: Dialyzer Design, Nutrient Transfer, Growth, and Dialysis Aeration.
- ABDELWAHID ABDELWAHID IBRAHIM, Ph.D. B.S., University of Cairo; M.S., University of Kansas.
Geology. Major Professor: William J. Hinze, Professor.
Thesis: The Application of the Gravity Method to Mapping Bedrock Topography in Kalamazoo County, Michigan.
- MICHAEL HOWARD IMPEY, Ph.D. B.A., M.A., University of London.
Comparative Literature. Major Professor: Laurence M. Porter, Associate Professor.
Thesis: Patterns of Creativity in Tudor Arghezi's *Cuvinte Potrivite*.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- DILMUS DELANO JAMES, Ph.D. B.A., M.A., University of Texas.
Economics. Major Professor: Wolfgang Strassmann, Professor.
Thesis: The Economic Feasibility of Employing Used Machinery in Less Developed Countries.
- JOSEPH STEVE JOHNSON, Ph.D. B.A., University of Utah; M.A., Michigan State University.
Speech and Theatre. Major Professor: David C. Ralph, Professor.
Thesis: Radio Music — The Gatekeepers.
- KENNETH RAY JOHNSON, Ph.D. B.S., Kent State University; M.A., Michigan State University.
Audiology and Speech Sciences. Major Professor: Edward J. Hardick, Professor.
Thesis: Audiological Manifestations in Juvenile-Onset Diabetics.
- RELDIA JEAN JOHNSON, Ph.D. B.A., College of Wooster; M.A., Purdue University.
Education. Major Professor: Russell J. Kleis, Professor.
Thesis: An Exploration of Relationships Between and Among Empathy, Trust and Ego Stage Development in the Adult Learner.
- RICHARD DOUGLAS JORDAN, Ph.D. B.F.A., Nebraska State Teachers College; M.A., Michigan State University.
English. Major Professor: Joseph H. Summers, Professor.
Thesis: Thomas Traherne: Eternity — Time and the *Centuries*.
- MADHAV PRASAD KACKER, D.B.A. M. Commerce, University of Allahabad, India; Banaras Hindu Varsity, India.
Business Administration (Marketing). Major Professor: Reed Moyer, Professor.
Thesis: An Exploratory Study of the Marketing Adaptation of U. S. Business Firms Operating in India.
- ANTHONY K. KALLINGAL, Ph.D. B.A., B.Ed., Karala University; M.Ed., Marquette University.
Education. Major Professor: Robert C. Craig, Professor.
Thesis: Differential Validities of Selected Variables in the Prediction of College Success for Blacks and Whites.
- MOJTABA KASHEFI-ZIHAGH, Ph.D. B.A., Military Academy; M.B.A., Michigan State University.
Business Administration (Management). Major Professor: Bruce P. Coleman, Assistant Professor.
Thesis: An Empirical Investigation of the Relationship Between Value Systems and Organizational Effectiveness.
- EDGAR A. KELLEY, Ph.D. B.A., M.A., Michigan State University.
Education. Major Professor: John H. Suehr, Associate Professor.
Thesis: Case Studies and An Analysis of the Role of Morale, Organizational Climate, and Conflict in the Study of Secondary School Environments.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- CHARLES ERNEST KENOYER, Ph.D. B.S., Iowa State University; M.S., Michigan State University.
Psychology. Major Professor: James Phillips, Associate Professor.
Thesis: Some Hypothesis Theory Models for Performance in Concept Learning Tasks.
- GRAHAM BURRELL KERR, Ph.D. B.A., M.A., Oxford University.
Communication. Major Professor: Everett M. Rogers, Professor.
Thesis: Leadership and Communication in the Collective Adoption Process of Development Associations in Eastern Nigeria.
- LORNIE G. KERR, Ph.D. B.S., M.A., Central Michigan University.
Education. Major Professor: Fred Vescolani, Professor.
Thesis: An Evaluation of a Delayed Admissions Procedure Rendered to Selected Michigan High School Seniors by the Michigan State University Office of Admissions.
- JOHANNES KINFU, D.B.A. B.A., University College of Addis Ababa, Ethiopia; M.S., University of Utah.
Business Administration (Accounting). Major Professor: Gardner M. Jones, Professor.
Thesis: The Accounting Provisions of the Commercial Code of Ethiopia.
- JOHN WILLIAM KING, Ph.D. B.S.A., Purdue University; M.S., University of Rhode Island.
Crop Science. Major Professor: James B. Beard, Associate Professor.
Thesis: Factors Affecting the Heating and Damage of Merion Kentucky Bluegrass (*Poa pratensis* L.) Sod Under Simulated Shipping Conditions.
- GORDON WILLIAM KIRK, JR., Ph.D. A.B., Hope College; M.A., Michigan State University.
History. Major Professor: James H. Soltow, Professor.
Thesis: The Promise of American Life: Social Mobility in a Nineteenth Century Immigrant Community, Holland, Michigan, 1847-1894.
- CARL EDWARD KNIGHT, Ph.D. B.S., M.S., Michigan State University.
Poultry Science. Major Professor: Robert Ringer, Professor.
Thesis: The Anatomy of the Structures Involved in the Erection-Dilution Mechanism in the Male Domestic Fowl.
- IRENE EMILY KOICHEVAR, Ph.D. B.S., M.S., Michigan State University.
Chemistry. Major Professor: Peter J. Wagner, Professor.
Thesis: A Kinetic Study of the Quenching of Triplet Butyrophenone By Monoolefins: A Model for Ketone Triplet-Monoolefin Interactions.
- THOMAS JAMES KRAMER, Ph.D. B.S., Xavier University; M.A., Michigan State University.
Psychology. Major Professor: Mark E. Rilling, Associate Professor.
Thesis: The Differential Reinforcement of Low Rates and Stimulus Control.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- PAO KWEN KU, Ph.D. B.S., National Taiwan University; M.S., Michigan State University. Animal Husbandry and Institute of Nutrition. Major Professor: Duane E. Ullrey, Professor.
Thesis: Nucleic Acid and Protein Metabolism in the Zinc-Deficient Pig.
- WENDELL LEE KUCKER, Ph.D. B.S., M.S., South Dakota State University. Dairy. Major Professor: Clinton E. Meadows, Professor.
Thesis: Adoption of Production Testing and Artificial Insemination by Michigan Dairy Farmers.
- RONALD THOMAS KUCZENSKI, Ph.D. B.S., University of Notre Dame. Biochemistry. Major Professor: Clarence H. Suelter, Professor.
Thesis: Effects of Temperature, Substrates, Cations, and Fructose 1,6-Diphosphate on the Conformations, Subunit Structure, and Stability of Yeast Pyruvate Kinase.
- ROBERT ROGER KURTZ, Ph.D. B.A., Western Michigan University. Education. Major Professor: Norman Kagan, Professor.
Thesis: A Comparison of Different Approaches to the Measurement of Counselor Empathy in Personal Counseling.
- KUMARAN KOOTHIREZHI KUTTY, Ph.D. B.A., M. C. College; M.Sc., University of Kerala. Mathematics. Major Professor: John J. Masterson, Associate Professor.
Thesis: Prime Ideals in a Vector Lattice and Its Dedekind Completion.
- ALAN LABOVITZ, Ph.D. B.S., Temple University; M.A., Michigan State University. Speech and Theatre. Major Professor: Kenneth G. Hance, Professor.
Thesis: Negro-Oriented Radio in Michigan, 1969-1970.
- IRVING MARK LANE, Ph.D. B.S., Brooklyn College; M.A., Michigan State University. Psychology. Major Professor: John H. Wakeley, Associate Professor.
Thesis: Behavioral Strategies in Wage Distribution.
- MYRNA E. F. LANE, Ph.D. B.S., Brooklyn College; M.A., Michigan State University. Psychology. Major Professor: Lucy R. Ferguson, Professor.
Thesis: Achievement Motivation, Level of Academic Achievement and Therapy Outcome.
- KRISTIN OLSON LAUER, Ph.D. B.A., University of Dayton; M.A., Emory University. English. Major Professor: Clyde E. Henson, Professor.
Thesis: The Interior Monologue in *The Ambassadors* and *The Golden Bowl*.
- BRIANT HAMOR LEE, Ph.D. B.A., Adelphi College; M.A., Indiana University. Theatre. Major Professor: E. C. Reynolds, Professor.
Thesis: The Contributions of Pierre Patte and Paolo Landriani to European Neo-Classic Theatre Architecture.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

BARABARA RALL LOWREY, Ph.D.

B.A., Michigan State University; M.S., University of Wisconsin. Economics. Major Professor: Mordechai Kreinin, Professor.
Thesis: The Effect of the Disparate Treatment of Tax Rebates Upon Trade Patterns of Manufactured Goods Under the General Agreement of Tariffs and Trade.

ELMER LYLE MALCOLM, Ph.D.

B.A., Columbia Union College; M.A., Potomac University. Speech and Theatre. Major Professor: Kenneth G. Hance, Professor.
Thesis: A Rhetorical Analysis of the Folkenberg-McFarland "Five Day Plan to Stop Smoking."

CLIFFORD N. MARCUS, Ph.D.

A.B., Hope College; M.A., University of Michigan. Education. Major Professor: Charles A. Blackman, Professor.
Thesis: Contributions of Student Teaching Programs to Michigan Cooperating Schools as Perceived by Student Teachers, Supervising Teachers and Administrators.

ROBERT ALLEN MARK, Ph.D.

B.A., Northwestern University; M.A., University of Illinois. Communication. Major Professor: R. Vincent Farace, Professor.
Thesis: Parameters of Normal Family Communication in the Dyad.

SITA PATRICIA SMITH MARKS, Ph.D.

B.A., Douglass College. English. Major Professor: Clyde E. Henson, Professor.
Thesis: Character Patterns in Henry James's *The Wings of the Dove* and *The Golden Bowl*.

WILLIAM EDWARD MARWICK, Ph.D.

B.M., University of Toronto; M.M., Michigan State University. Music. Major Professor: Corliss Arnold, Associate Professor.
Thesis: The Sacred Choral Music of Healey Willan.

ROBERT GEORGE MAY, Ph.D.

B.A., Michigan State University. Business Administration (Accounting). Major Professor: Roland F. Salmonson, Professor.
Thesis: The Influence of Quarterly Earnings Announcements on Investor Decisions as Reflected in Common Stock Price Changes.

CHARLES EMMETTE McDANIEL, Ph.D.

B.S., M.S., Florida State University. Education. Major Professor: Robert O. Nolan, Professor.
Thesis: A Study to Compare the Relative Effectiveness of Selected Laboratory and Classroom Programs in Driver and Traffic Safety Education.

DAVID GEORGE McDOWELL, Ph.D.

B.S., M.S., Michigan State University. Mathematics. Major Professor: Theodore Guinn, Professor.
Thesis: Functions Minimizing Algorithms.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- MICHAEL EDWIN MCGUIRE, Ph.D. B.A., University of Washington; M.S., Ball State University. Resource Development. Major Professor: Milton H. Steinmueller, Professor.
Thesis: An Approximation of Michigan's Spatial Water Needs.
- JOHN GILWELL McLEVIE, Ph.D. B.A., M.A., Dip. Ed., Victoria University of Wellington, New Zealand. Education. Major Professor: Troy L. Stearns, Professor.
Thesis: An Examination of Teaching Concerns Reported by Secondary Student Teachers.
- EDDIE SPENCER MEADOWS, Ph.D. B.S., Tennessee A & I State University; M.S., University of Illinois. Music. Major Professor: Robert Sidnell, Associate Professor.
Thesis: The Relationship of Music Preference to Certain Cultural Determiners.
- HENRY STANLEY MIKA, Ph.D. B.S., Lawrence Institute of Technology; M.S., University of Michigan. Electrical Engineering. Major Professor: John B. Kreer, Professor.
Thesis: Solution of a Linear Regulator Problem with Quadratic Performance Index and State Variable Constraints.
- DONALD RICHARD MILLER, Ph.D. B.A., M.A., Central Michigan University. Education. Major Professor: Herbert C. Rudman, Professor.
Thesis: An Analysis of Management Team Characteristics, Educational Characteristics Affecting the Quality of Education, and Selected Cost Factors of Michigan School Districts.
- ELWOOD LAVERNE MILLER, Ph.D. B.S.F., Northern Arizona University; M.F., Oregon State University. Forestry. Major Professor: Gerhard Schneider, Professor.
Thesis: Studies of Environmental Factors Affecting Jack Pine (*Pinus Banksiana* Lamb.) Regeneration.
- THOMAS V. MILLER, Ph.D. B.A., Vanderbilt University; M.A., Southern Illinois University. Education. Major Professor: Bob B. Winborn, Professor.
Thesis: The Effect of Self and in Vivo Desensitization on Counselor Trainee Anxiety and Performance.
- VINCENT P. MILLER, Ph.D. M.A., Pennsylvania State University; B.S., Muskingum College. Geography. Major Professor: Lawrence M. Sommers, Professor.
Thesis: The Spatial Impact of Isolation on Urban-Rural Relationships in Setesdal, South Norway.
- DANIEL MILLIN, Ph.D. B.A., M.A., Hebrew University. Education. Major Professor: Herbert C. Rudman, Professor.
Thesis: A Computer Assisted Approach to Curriculum Planning.
- ROBERT CLAYTON MILLS, Ph.D. B.S., Central Michigan University; M.A., Michigan State University. Education. Major Professor: Robert O. Nolan, Professor.
Thesis: A Survey of Opinions of Secondary School Principals Toward the Driver Education Programs Offered in the Public Schools of the State of Michigan.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- DUANE CONRAD MILNE, Ph.D. B.A., B.P.E., McMaster University; M.A., Michigan State University. Education. Major Professor: Philip L. Reuschlein, Associate Professor. Thesis: The Relation Between Anxiety and Motor Performance in Young Children.
- EVAN RANDALL MINNICH, Ph.D. B.A., Albion College; M.S., Northwestern University. Chemistry. Major Professor: James L. Dye, Professor. Thesis: A Stopped-Flow Study of the Protonation of Aromatic Radical Anions.
- LINDA DARLENE MITCHELL, Ph.D. B.S., Ohio University. Education. Major Professor: William A. Mehrens, Professor. Thesis: The Comparative Effectiveness of Different Item Analysis Techniques in Increasing Change Score Reliability.
- WILLIAM GRANT MITCHELL, Ph.D. A.B., Emory University; M.A., University of Florida. Communication. Major Professor: Randall Harrison, Professor. Thesis: Communication of an Educational Innovation in an Institution of Higher Learning.
- MERRILL MORRIS MITLER, Ph.D. B.A., University of Wisconsin; M.A., Michigan State University. Psychology. Major Professor: Ralph Levine, Associate Professor. Thesis: The Developmental Significance of Low Voltage, Fast Wave Sleep for the Stimulus Input Requirements, Regulative Mechanisms, and Development of the Central Nervous System in a Species of Deer-mouse, *Peromyscus maniculatus bairdi*.
- HARVEY W. MOHRENWEISER, Ph.D. B.S., M.S., University of Minnesota. Dairy and Biochemistry. Major Professors: Willis A. Wood, Professor; Roy S. Emery, Professor. Thesis: Role of Hormones in Controlling Ribonucleic Acid Synthesis During Lactogenesis.
- ROBERT M. MONCZKA, Ph.D. B.S., M.B.A., Michigan State University. Business Administration (Management). Major Professor: John H. Hoagland, Professor. Thesis: Time-Shared Information Systems for Purchasing.
- ALYCE H. KAWAZOE MORISHIGE, Ph.D. Ed.B., M.A., University of Hawaii. Comparative Literature. Major Professor: C. David Mead, Professor. Thesis: The Theme of the Self in Modern Japanese Fiction: Studies on Dazai, Mishima, Abé, and Kawabata.
- JAMES CLIFFORD MORRISON, Ph.D. B.A., University of Oregon; M.A., University of Tennessee. Psychology. Major Professor: Frederic R. Wickert, Professor. Thesis: Organizational Climate, Individual Background, and Values and Personal Job Goals in a Sample of Scanlon Plan Plants.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- LUKE MAKORE MUGWIRA, Ph.D. B.S., Lewis and Clark College; M.A., Michigan State University. Soil Science. Major Professor: Bernard D. Knezek, Associate Professor. Thesis: The Influence of Zinc Fertilization Upon the Growth of and Zinc Distribution in Navy Bean Plant Tops.
- LAWRENCE DAVID MUSCHEK, Ph.D. B.S., The Philadelphia College of Pharmacy and Science. Biochemistry. Major Professor: James L. Fairley, Professor. Thesis: The Purification and Characterization of a Nuclease from the Seeds of Muskmelon.
- MYUNG MI MYUNG, Ph.D. B.A., Sogang Jesuit College; M.A., Wake Forest College. Mathematics. Major Professor: Kfung W. Kwun, Professor. Thesis: PL Involutions of Some 3-Manifolds.
- MICHAEL FOUAD NASSAR, Ph.D. B.A., M.A., South Dakota University. Anatomy. Major Professor: Bruce E. Walker, Professor. Thesis: A Morphologic and Radioautographic Study of the Prosimian, Galago Senegalensis.
- MICHAEL A. NERBONNE, Ph.D. B.A., M.A., Michigan State University. Audiology and Speech Sciences. Major Professor: Edward J. Hardick, Professor. Thesis: A Comparison of Brief Tone Audiometry with Other Selected Auditory Tests of Cochlear Function.
- GERALD WARREN NYQUIST, Ph.D. B.S., Lawrence Institute of Technology; M.S., Wayne State University. Mechanics. Major Professor: Gary L. Cloud, Associate Professor. Thesis: The Corneal Lamella Anisotropic Elastic Constitutive Relation: Theory and Experiment.
- JACQUELINE JEAN OATMAN, Ph.D. B.A., Michigan State University; M.A., University of Minnesota. Education. Major Professor: Louise M. Sause, Professor. Thesis: A Study of Conflicts Expressed by a Selected Sample of Public School Educators Concerning Involvement in Employee Negotiations.
- MADHAV PANDURANG PALNITKAR, Ph.D. B.S., University of Bombay; M.S., Michigan State University. Food Science. Major Professor: Dennis R. Heldman, Associate Professor. Thesis: Thermodynamic Characteristics of Low and Intermediate Moisture Foods.
- BRAINARD GUY PETERS, Ph.D. B.A., University of Richmond. Political Science. Major Professor: John N. Collins, Associate Professor. Thesis: The Development of Social Policy: A Longitudinal Analysis of Social Expenditures and Their Impacts in the United Kingdom, France, and Sweden.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- GARY RAYMOND POIRER, Ph.D. B.S., M.S., Michigan State University.
Zoology. Major Professor: John R. Shaver, Professor.
Thesis: An Ultrastructural Study of Spermatogenesis in Two Species of *Rana*.
- ELENA PRADO POLO, Ph.D. B.S.E., Colegio de Sta. Isabel; M.A., Ateneo de Manila.
English. Major Professor: C. David Mead, Professor.
Thesis: Themes and Meanings in the American and Filipino Novels of the Second World War in the Pacific.
- LEONARD JAMES POSTEMA, Ph.D. A.B., Calvin College; M.A., Michigan State University.
Psychology. Major Professor: Albert I. Rabin, Professor.
Thesis: Reminiscing, Time Orientation, and Self-Concept in Aged Men.
- THOMAS H. POULOS, Ph.D. B.S., Milwaukee State Teachers College; M.S., University of Wisconsin.
Education. Major Professor: John E. Jordan, Professor.
Thesis: Attitudes Toward the Deaf: A Guttman Facet Theory Analysis of Their Content, Structure, and Determinants.
- VELAGAPUDI KANTA PRASAD, Ph.D. B.Sc., M.Sc., Andhra University.
Business Administration (Marketing). Major Professor: W. J. E. Crissy, Professor.
Thesis: An Analysis of the Purchase Clustering Patterns of Food Shoppers.
- CECIL ERNEST PURIFOY, Ph.D. B.S., University of Texas; M.A., Michigan State University.
Education. Major Professor: Troy L. Stearns, Professor.
Thesis: A Study of the Possible Subject Matter Content for a Short Course of Class Instruction in Christian Science.
- ABDUL RAZIQ QAZI, Ph.D. B.S., B.E., University of Peshawar; M.S., Colorado State University.
Agricultural Engineering. Major Professor: Ernest H. Kidder, Professor.
Thesis: Determination of Capillary Conductivity of Unsaturated Porus Media from Moisture Characteristics.
- JOAN IRENE QUILLING, Ph.D. B.S., M.S., Stout State University.
Education. Major Professor: Marvin E. Grandstaff, Assistant Professor.
Thesis: The Nature of the Family Projected by the Home Economics Profession as Evidenced Through Examination of the American Home Economics Association Literature.
- JOAN ELIZABETH QUINN, Ph.D. B.S., Purdue University; M.S., Michigan State University.
Mathematics. Major Professor: Kwung W. Kwun, Professor.
Thesis: Equivalence of Tubular Neighborhoods.
- JOSEPH EDWARD QUINN, Ph.D. B.S., University of Dayton; M.S., Michigan State University.
Mathematics. Major Professor: John J. Masterson, Associate Professor.
Thesis: Measure Riesz Spaces and the Egoroff Theorem.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- KENNETH WARREN RABINOWITZ, Ph.D. B.S., City College of New York.
Biochemistry. Major Professor: Willis A. Wood, Professor.
Thesis: Mechanisms of Allosteric Control of L-Threonine Dehydrase of *Escherichia Coli* by Adenosine-5¹-Monophosphate.
- SAMBHARAMADOM K. RAMASWAMI, Ph.D. B.S., University College Trivandrum, India; Diploma, Maharaja's College.
Chemistry. Major Professor: Harold Hart, Professor.
Thesis: A Study of the Diels-Alder Addition of Nitrosobenzene to Cyclic Dienones.
- DOUGLAS DEY RANDALL, Ph.D. B.S., South Dakota State University.
Biochemistry. Major Professor: N. Edward Tolbert, Professor.
Thesis: 3-P-Glycerate Phosphatase in Leaves.
- DICK REED, Ph.D. B.S., M.A., Michigan State University.
Education. Major Professor: John H. Suehr, Associate Professor.
Thesis: The Effect of Pupil-Teacher Feedback on Teacher Flexibility as Perceived by Students.
- DONALD JAMES REICHARD, Ph.D. A.B., Miami University; M.A., Kent State University.
Education. Major Professor: Paul L. Dressel, Professor.
Thesis: Influence, Emphasis, Reference Group Orientation and Communication Within the Autonomous University Department.
- ROSALIND REICHARD, Ph.D. B.A., Harpur College; M.S., Michigan State University.
Mathematics. Major Professor: John J. Masterson, Associate Professor.
Thesis: Monotone Norms and Seminorms on an Archimedean Vector Lattice.
- LOUIS THURMAN RICHARDS, Ph.D. B.A., Grambling College; M.A., Michigan State University.
Mathematics. Major Professor: William T. Sledd, Professor.
Thesis: An Investigation of Uniformly Convergent Power Series on the Closed Unit Disk.
- THOMAS LEE RICHMOND, Ph.D. B.M., Western Michigan University; M.M., Michigan State University.
Music. Major Professor: H. Owen Reed, Professor.
Thesis: Orchestem for Small Ensemble and Orchestra.
- JAMES EDWARD RILEY, Ph.D. A.B., M.A., Western Michigan University.
Education. Major Professor: T. Wayne Taylor, Professor.
Thesis: A Comparison of the Abilities of Late Elementary School Children to Learn Tasks on the Operations of Signed Numbers.
- RICHARD DELOSE RINGEISEN, Ph.D. B.S., Manchester College; M.S., Michigan State University.
Mathematics. Major Professor: Edward A. Nordhaus, Professor.
Thesis: The Maximum Genus of a Graph.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- DENNIS C. RITTENMEYER, Ph.D. B.S., M.A., Western Michigan University.
Education. Major Professor: Walter F. Johnson, Professor.
Thesis: A Study of the Student's Relationship With His Resident Assistant.
- GERALD FRANKLIN ROBERTS, Ph.D. B.A., Murray State College; M.A., University of Kentucky.
History. Major Professor: Gilman Ostrander, Professor.
Thesis: The Strenuous Life: The Cult of Manliness in the Era of Theodore Roosevelt.
- KENNETH PATRICK RODE, Ph.D. A.A., Calvin College; M.A., University of Michigan.
Education. Major Professor: Dale V. Alam, Associate Professor.
Thesis: An Exploratory Study of the Expressed Attitudes of the Grand Rapids Public School Teachers and the Grand Rapids Christian School Teachers in Six Areas of Professional Human Relations.
- ROBERT ALLEN RUH, Ph.D. B.A., Valparaiso University; M.A., Michigan State University.
Psychology. Major Professor: Carl F. Frost, Professor.
Thesis: Ego Need Gratification, Extra-Work Socialization, and Attitudes Toward the Job.
- ROBERT OTTO RUHLING, Ph.D. B.S., M.A., University of Maryland.
Education. Major Professor: Wayne D. Van Huss, Professor.
Thesis: Histochemical Observation on Rat Cardiac Muscle Following Chronic Exercise.
- JAMES RAYMOND RYAN, Ph.D. B.A., M.A., Ed.S., Michigan State University.
Education. Major Professor: Dale V. Alam, Associate Professor.
Thesis: Perceptions of Teachers and Students Toward the Unit Step Program in its First Year of Operation in one Michigan Senior High School.
- SAKR AHMED SAKR, Ph.D. B.C., Cairo University; M.A., Southern Methodist University; M.A., University of Michigan.
Economics. Major Professor: Anthony Koo, Professor.
Thesis: Development Alternatives in Egypt in 1974-1975.
- IRVIN RAY SAVIDGE, Ph.D. B.S., M.S., Pennsylvania State University.
Zoology. Major Professor: John A. King, Professor.
Thesis: Social Factors Contributing to the Departure of *Peromyscus Maniculatus Bairdi* from their Natal Site.
- AJOVI BLESSING SCOTT-EMUAKPOR, Ph.D. B.A., University of Nigeria; M.S., Michigan State University.
Zoology. Major Professor: Herman M. Slatis, Professor.
Thesis: The Biochemical Characterization of a Peculiar Kind of Citrullinemia (An Inborn Error of Metabolism in Man): A Possible New Pathway for Ureogenesis.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

JAMES HENRY SHADY, Ph.D.

B.S., Oklahoma State University.
Entomology. Major Professor: James W. Butcher, Professor.
Thesis: The Spatial Patterns of Selected Soil Acari and Collembola in an Ecologically Manipulated Environment.

WALTER BAXTER SHAW, Ph.D.

B.A., M.S., Miami University.
Education. Major Professor: Eldon R. Nonnamaker, Professor.
Thesis: A Study of Attrition Among Selected Former Student Personnel Workers.

ROBERT LANCE SHOTLAND, Ph.D.

B.S., M.A., Michigan State University.
Psychology. Major Professor: Robert H. Davis, Professor.
Thesis: The Communication Patterns and the Structure of Social Relationships at a Large University.

ANDREW FRANK SIKULA, Ph.D.

B.A., Hiram College; M.B.A., Michigan State University.
Business Administration (Management). Major Professor: R. Winston Oberg, Professor.
Thesis: A Study of the Values and Value Systems of College Roommates in Conflict and Nonconflict Situations, and an Investigation to Determine Whether Roommate Conflict Can Be Attributed to Differing Values and Value Systems.

RONALD CRAIG SLABAUGH, Ph.D.

B.A., Willamette University.
Biochemistry. Major Professor: Allan J. Morris, Associate Professor.
Thesis: Purification of Peptidyl-tRNA from Rabbit Reticulocyte Ribosomes.

JAMES M. SOBOTA, Ph.D.

B.A., College of St. Thomas; M.S., Michigan State University.
Mathematics. Major Professor: Patrick H. Doyle, Professor.
Thesis: Construction of Antoine — Type Maps Between Continua in Euclidean Space.

CHARLES CALVIN SPENCE, III, Ph.D.

B.S., The Ohio State University; M.S., Wayne State University.
Education. Major Professor: Laurine Fitzgerald, Professor.
Thesis: Perceptions of Selected Faculty and Undergraduate Students of Three Different Environments at a Complex University Using the College and University Environment Scale: An Experimental Social Science Residential College, a Conventional Living-Learning Residence Hall and a College of Social Science.

LAWRENCE EDWARD SPENCE, Ph.D.

B.S., Towson State College; M.S., Michigan State University.
Mathematics. Major Professor: Kwung W. Kwun, Professor.
Thesis: Images of Certain Manifolds Under Mappings of Degree 1.

JAMES DAVID SPIVACK, Ph.D.

B.A., M.S., State University of New York.
Education. Major Professor: Norman Kagan, Professor.
Thesis: The Use of Developmental Tasks for Training Counselors Using Interpersonal Process Recall.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- FREDERICK ALLAN STALEY, Ph.D. B.A., M.A., Western Michigan University.
Education. Major Professor: William J. Walsh, Professor.
Thesis: A Comparison Study of the Effects of Pre-Service Teachers Presenting One or Two Micro-Teaching Lessons to Different Sized Groups of Peers on Selected Teaching Behaviors and Attitudes in an Elementary Science Methods Course.
- GEORGE WILLIAM STANSBURY, JR., Ph.D. B.S., Boston University; M.A., Michigan State University.
Education. Major Professor: Charles A. Blackman, Professor.
Thesis: The Establishment of a Conceptual Framework to Enhance Educators' Understanding of Comprehensive Planning.
- ROBERT LLOYD STEBBINS, Ph.D. B.S., Colorado State University; M.S., University of California.
Horticulture. Major Professor: Donald H. Dewey, Professor.
Thesis: Orchard Factors Affecting the Internal Breakdown Disorder of 'Jonathan' Apples.
- ALAN EUGENE STOCKLAND, Ph.D. B.S., University of Nebraska; M.S., Michigan State University.
Microbiology and Public Health. Major Professor: Charles L. San Clemente, Professor.
Thesis: Isozymic and Immunological Studies of Staphylococcal Lactate Dehydrogenase.
- LYLE MARTIN STONE, Ph.D. B.A., University of Nebraska.
Anthropology. Major Professor: Charles C. Cleland, Associate Professor.
Thesis: Archaeological Research at Fort Michilimackinac, an Eighteenth Century Historic Site in Emmet County, Michigan: 1959-1966 Excavations.
- RUDOLF STEPHENS STRUKOFF, Ph.D. B.M.E., Emmanuel Missionary College; M.M., Michigan State University.
Music. Major Professor: Russell Friedewald, Professor.
Thesis: *The Greatest of These* for Mixed Chorus, Bass Solo, Organ, Horn F and Percussion.
- FREDERICK PAUL STUTZ, Ph.D. B.A., Valparaiso University; M.S., Northwestern University.
Geography. Major Professor: James O. Wheeler, Associate Professor.
Thesis: Spatial Analysis of Urban Inter-Residential Social Trip Flows.
- DONALD THOMAS SUIT, Ed.D. B.A.E., M.Ed., University of Florida.
Education. Major Professor: Don E. Hamachek, Professor.
Thesis: An Experimental Investigation of a Belief in Hypnosis and Hypnotic Suggestibility.
- TERRY SURLES, Ph.D. B.S., St. Lawrence University.
Chemistry. Major Professor: Alexander I. Popov, Professor.
Thesis: Investigations of Polyhalogen Complexes.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

VYAGHRESWARUDU SUSARLA, Ph.D.

B.S., Hindu College; M.S., Banaros Hindu University.
Statistics. Major Professor: James Hannan, Professor.
Thesis: Rates of Convergence in Sequence-Compound Squared-Distance Loss Estimation and Two-Action Problems.

KATHLEEN ANN TAYLOR, Ph.D.

B.S., University of Dayton; M.S., Michigan State University.
Mathematics. Major Professor: Gerald D. Taylor, Associate Professor.
Thesis: Contributions to the Theory of Restricted Polynomial and Rational Approximation.

WILLIAM L. THOMAS, JR., Ph.D.

B.S., M.S., University of Tennessee.
Education. Major Professor: Laurine Fitzgerald, Professor.
Thesis: Perceptions of University Goals: A Comparison of Administrators, Faculty and Students Engaged in the Practice, Teaching and/or Study of Student Personnel Administration at Michigan State University with a Nationwide Study of University Faculty and Administrators.

CHESTER RANDOLPH TITUS, Ph.D.

B.A., M.A., University of New Hampshire.
Education. Major Professor: Eldon R. Nonnamaker, Professor.
Thesis: Student Perceptions of Important Factors in Single Student Housing.

GEORGE FREDERICK TRENTELMAN, Ph.D.

B.S., Clarkson College of Technology; M.S., Michigan State University.
Physics. Major Professor: Edwin Kashy, Professor.
Thesis: An Experimental Test of the Isobaric Multiplet Mass Equation.

JAMES GEORGE TRUCHAN, Ph.D.

B.S., M.S., Michigan State University.
Entomology. Major Professor: James Butcher, Professor.
Thesis: Field Evaluation of *Dendrosoter Protuberans* as a Biological Control Agent for *Scolytus Multistriatus*, the Primary Vector of Dutch Elm Disease.

GEORGE WOOD TUMA, Ph.D.

B.S., Harvard College; B.D., The Church Divinity, School of the Pacific; M.A., Michigan State University.
English. Major Professor: John A. Yunk, Professor.
Thesis: A Comparative Analysis of the Thought of the Fourteenth-Century English Mystics.

CHARLES DAVID TWEEDLE, Ph.D.

B.A., M.A., University of Oregon.
Zoology. Major Professor: Charles S. Thornton, Professor.
Thesis: Transneuronal Effects on Amphibian Limb Regeneration.

EUGENE L. VANDENBOSS, Ph.D.

A.B., University of Michigan.
Mathematics. Major Professor: Harvey Davis, Associate Professor.
Thesis: Set Functions and Local Connectivity.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

PAUL B. VENZKE, Ph.D.

B.S., M.S., Michigan State University.
Mathematics. Major Professor: W. Eugene Deskins, Professor.
Thesis: Finite Groups Having Many Intersection-Sensitive Subgroups.

BOB GARTH VOLK, Ph.D.

B.S., M.S., The Ohio State University.
Soil Science. Major Professor: Boyd G. Ellis, Professor.
Thesis: Movement and Adsorption on Zinc by a Wisner Silty Clay Loam Soil.

ELMER H. VRUGGINK, Ph.D.

B.A., Hope College; M.A., University of Michigan.
Education. Major Professor: Charles A. Blackman, Professor.
Thesis: A Study of the Contributions of Compensatory Programs in a Large Urban School System.

PERCY DE FOREST WARNER, III, Ph.D.

B.A., American University; M.A., Michigan State University.
Economics. Major Professor: John Hunter, Professor.
Thesis: The Impact of the Service on the Foreign Debt on the Monetary Structure in Argentina: 1955-1965.

JOSEPH ANTHONY WEHLEN, JR., Ph.D.

B.A., Xavier University; M.S., Michigan State University.
Mathematics. Major Professor: Edward C. Ingraham, Associate Professor.
Thesis: Algebras of Finite Cohomological Dimension.

DELBERT L. WHITENACK, Ph.D.

B.S., D.V.M., Oklahoma State University; M.S., Michigan State University.
Pathology. Major Professor: Charles K. Whitehair, Professor.
Thesis: The Influence of an Enteric Infection on Zinc Metabolism.

GEORGE EDWARD WHITESEL, Ph.D.

B.A., Miami University; M.A., Columbia University.
English. Major Professor: Sam S. Baskett, Professor.
Thesis: Evolution As Metaphor: Patterns of Continuity in the Thought and Aesthetic of Aldous Huxley.

PAUL BASCOM WILLIAMS, Ph.D.

B.S., Wayne State University; M.S., Michigan State University.
Physics. Major Professor: Michael J. Harrison, Professor.
Thesis: Theory of Transition Element Superconductors.

ELSIE BERDACH WOODYARD, Ph.D.

B.A., San Francisco State College; M.A., Michigan State University.
Psychology. Major Professor: Bill L. Kell, Professor.
Thesis: A Study of Pre-intake Dropout at St. Lawrence Community Mental Health Center.

SANDRA JEAN WOOLUM, Ph.D.

B.A., University of Denver; M.A., Michigan State University.
Psychology. Major Professor: Donald M. Johnson, Professor.
Thesis: The Verbal Context Paradigm.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DOCTORAL DEGREES — GRADUATED SUMMER TERM, 1970 (Continued)

- MICHAEL DENNIS WROBLEWSKI, Ph.D. B.S., M.S., University of Wisconsin.
Education. Major Professor: Louis Romano, Associate Professor.
Thesis: The Risk Taking of Students in the First Course of the
Teacher Training Sequence at Michigan State University as Measured
by Two Instruments.
- TSE-CHUN YANG, Ph.D. B.S., Taiwan Provincial College of Agriculture; M.S., Michigan State
University.
Soil Science. Major Professor: A. Earl Erickson, Professor.
Thesis: Determination of Oxygen Concentration in Soil with Collodion
Coated Silver Wire Electrodes.
- WILLIAM JOSEPH YANKEE, Ph.D. B.S., M.A., Western Michigan University.
Education. Major Professor: Max R. Raines, Professor.
Thesis: A Description and Evaluation of the Associate Degree Law
Enforcement Curricula in the Public Community and Junior Colleges
of Michigan.
- SHAN PANG YIEN, Ph.D. B.A., Tunghai University; M.A., Michigan State University.
Communication. Major Professor: Hideya Kumata, Professor.
Thesis: Employee Participation in Organizational Decision Making
and Acceptance of Planned Change.
- GEORGE DAVID YOSTRA, Ph.D. B.S., M.A., Bob Jones University; M.A., Michigan State University.
Education. Major Professor: George R. Myers, Professor.
Thesis: A Study of Criteria for Selection of College Supervisors of
Student Teachers as Perceived by Student Teaching Administrators
of Selected Institutions of the Southeastern Regional Association for
Student Teaching.
- PETER JAMES ZACHARIAS, Ph.D. B.A., M.A., Michigan State University.
English. Major Professor: George R. Price, Professor.
Thesis: An Analysis of the Motif of Death and Revival in the Tragi-
comedies of Shakespeare, Daniel, and Fletcher.
- ARSHAD ZAMAN, Ph.D. B.A., University of Hawaii.
Economics. Major Professor: Jan Kmenta, Professor.
Thesis: Formulation and Estimation of a Complete System of De-
mand Equations.
- BRYCE FRANKLIN ZENDER, Ph.D. B.A., Heidelberg College; M.A.T., Michigan State University.
Education. Major Professor: Carl H. Gross, Professor.
Thesis: Soviet Techniques and Devices for Automatic Instruction.

SCHOOL FOR ADVANCED GRADUATE STUDIES

DIPLOMA FOR ADVANCED GRADUATE STUDIES — GRADUATED SUMMER TERM, 1970

ROLAND CLARENCE JONES, D.A.G. B.A., University of Michigan; M.A., Arizona State College.
English. Major Professor: Bernard J. Paris, Professor.

MICHAEL JOSEPH MASTERNAK, D.A.G. A.B., Indiana University; M.A., Michigan State University.
Social Science. Major Professor: Jack Steiber, Professor.

EDUCATIONAL SPECIALIST DEGREE — GRADUATED SUMMER TERM, 1970

ROBERT CHARLES AMBLE, Ed.S. B.S., M.A., Central Michigan University.
Education. Major Professor: Fred J. Vescolani, Professor.

ROSS HAROLD BARKER, Ed.S. B.S., M.S., University of Oregon
Education. Major Professor: Harvey F. Clarizio, Associate Professor.

LAWRENCE CONRAD BARRY, Ed.S. B.S., Boston College; M.A., University of Detroit.
Education. Major Professor: Harvey F. Clarizio, Associate Professor.

WALTER WILLIAM BLACKMORE, Ed.S. B.A., Michigan State University.
Education. Major Professor: William K. Durr, Professor.

J. HOWARD CLAYTON, Ed.S. B.A., M.E., Wayne State University
Education. Major Professor: Richard L. Featherstone, Professor.

ROBERT CURTIS ELLIOTT, Ed.S. B.A., University of South Dakota; M.A., Michigan State University.
Education. Major Professor: Charles A. Blackman, Professor.

ROBERT JOHN HECKSEL, Ed.S. B.S., M.A., Michigan State University.
Education. Major Professor: George R. Myers, Professor.

FREDERICK HENRY HEINER, Ed.S. B.A., M.A., Michigan State University.
Education. Major Professor: Stanley E. Hecker, Professor.

HERBERT L. HOWELL, Ed.S. B.S., Western Michigan University; M.A., Michigan State University.
Education. Major Professor: O. Donald Meaders, Professor.

GURDEV SINGH JOLLY, Ed.S. B.A., Punjab University; M.E., University of New Brunswick.
Education. Major Professor: James W. Costar, Professor.

SCHOOL FOR ADVANCED GRADUATE STUDIES

EDUCATIONAL SPECIALIST DEGREE — GRADUATED SUMMER TERM, 1970 (Continued)

JAMES WILLIAM KELLY, Ed.S.	B.S., Wayne State University; M.A., Michigan State University. Education. Major Professor: Samuel A. Moore, II, Associate Professor.
ARTHUR H. KIRKEBY, Ed.S.	B.A., M.A., Michigan State University. Education. Major Professor: Keith P. Anderson, Associate Professor.
JOSEPH HENRY KOCH, Ed.S.	B.A., Michigan State University; M.A., San Diego State College Education. Major Professor: Norman R. Stewart, Professor.
EMMETT WAYNE LIPPE, Ed.S.	B.S., Huntington College; M.A., Colorado College, Ball State University, Michigan State University. Education. Major Professor: Louis Romano, Associate Professor.
JOHN DAVID MYERS, Ed.S.	B.S., Huntington College; M.S., Purdue University. Education. Major Professor: Fred R. Ignatovich, Assistant Professor.
OCTOVIO GIRALDO NEIRA, Ed.S.	Diploma Hispanis, Instituto Caro y Cuervo, M.A., University of Arizona. Education. Major Professor: John E. Jordan, Professor.
MARLIN LEE OLSON, Ed.S.	B.A., M.A., Seattle Pacific College. Education. Major Professor: Glen O. Cooper, Professor.
JOHN PATRICK O'MEARA, Ed.S.	B.S., Rockhurst College; M.A., Michigan State University Education. Major Professor: George R. Myers, Professor.
DALE ARNOLD PETTERSON, Ed.S.	B.A., M.A., Michigan State University. Education. Major Professor: Harvey F. Clarizio, Associate Professor.
MURL EDWIN RECTOR, Ed.S.	B.S., Western Michigan University; M.A., Michigan State University. Education. Major Professor: Louis Romano, Associate Professor.
WAYNE FRANKLIN RICHARDS, Ed.S.	B.S., University of Illinois. Education. Major Professor: Fred J. Vescolani, Professor.
PHILLIP EMIL RUNKEL, Ed.S.	B.S., Ferris Institute; M.A., Michigan State University. Education. Major Professor: Fred J. Vescolani, Professor.
DOROTHY LOUISE STEWART, Ed.S.	A.B., Calvin College; M.A., University of Michigan. Education. Major Professor: Vivian Stevenson, Assistant Professor
WILLARD VAN ESSEN, Ed.S.	A.B., Calvin College; M.A., University of Michigan. Education. Major Professor: Fred J. Vescolani, Professor.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970

- BETTY SMITH ADAMS, Ph.D. B.S., M.A., The Ohio State University.
English. Major Professor: Arthur Sherbo, Professor.
Thesis: Dryden's Translation of Vergil and Its Eighteenth-Century Successors.
- LOREN RAY ALEXANDER, Ph.D. B.M., Southwestern College of Kansas; M.A., Colorado State College;
M.A., Michigan State University.
German. Major Professor: Mark Kistler, Professor.
Thesis: Image and Imagery in Frisch's *Die Schwierigen*.
- HAROLD ARTHUR ALLEN, Ph.D. B.S., M.A., University of Detroit.
Mathematics. Major Professor: Gerald D. Taylor, Associate Professor.
Thesis: The Closure Problem for the Backward Shift Operator in the Hardy p -Classes $1 \leq p < \infty$.
- RICHARD KEITH ALLEN, Ph.D. B.A., M.A., Michigan State University.
Speech and Theatre. Major Professor: Everett M. Rogers, Professor.
Thesis: A Comparison of Communication Behaviors in Innovative and Non-Innovative Secondary Schools.
- JOHN RICHARD ARNDT, Ph.D. B.S., Wheaton College; M.S., Oregon State University.
Education. Major Professor: Walter F. Johnson, Professor.
Thesis: A Study of Selected Factors Characterizing Freshmen Who Entered Michigan State University in Fall 1968 Identified as Under-, Over-, or Normal Achievers After One Term of College.
- WILLIAM LAMONT AUSTIN, Ed.D. B.A., M.A., Michigan State University.
Education. Major Professor: Clyde M. Campbell, Professor.
Thesis: A Comparative Study of Decentralization in Selected Schools and Industries.
- SABER ALI MOHAMAD AWAD, Ph.D. B. Commerce, Alexandria University; M.B.A., Michigan State University.
Business Administration (Accounting). Major Professor: Gardner M. Jones, Professor.
Thesis: Acceptance of Contemporary Management Accounting Techniques in Small Manufacturing Firms.
- BRUCE LOWELL BACHELDER, Ph.D. B.S., M.A., Michigan State University.
Psychology. Major Professor: M. Ray Denny, Professor.
Thesis: The Memory Span Paradigm: Its Use for the Analysis of Mental Retardation.
- ALAN BAILEY, Ph.D. B.A., State University of Iowa.
Geology. Major Professor: Thomas A. Vogel, Associate Professor.
Thesis: Comparison of Low-Temperature with High-Temperature Diffusion of Sodium in Albite.
- WILLARD EUGENE BARBER, Ph.D. B.A., M.S., Arizona State University.
Fisheries and Wildlife. Major Professor: Niles R. Kevern, Professor.
Thesis: Ecological Factors Influencing the MacroInvertebrates in the Pine River.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

ISAAC BARNETT, Ed.D.

B.S., M.S., A & T College.

Education. Major Professor: Robert O. Nolan, Professor.

Thesis: The Development and Use of a Video Tape as a Training Procedure for Michigan's Driver Licensing Personnel.

ELBA FRANKLIN BASKIN, Ph.D.

B.B.A., Lamar State College of Technology; M.B.A., Michigan State University.

Business Administration (Accounting). Major Professor: Roland I. Salmonson, Professor.

Thesis: An Empirical Evaluation of the Communicative Effectiveness of Consistency Exceptions in Auditors' Opinions.

RICHARD JOHN BASTIANI, Ph.D.

B.S., Santa Clara University; M.A., Sacramento State College.

Chemistry. Major Professor: Harold Hart, Professor.

Thesis: Part I: Structural Effects on 2,4-Cyclohexadienone Photochemistry. Part II: Mechanism for Electrophilic Addition to Methylcyclopropane. Part III: The Photochemistry of Arylnitrile Oxides.

RICHARD PHILIP BAXTER, Ph.D.

B.S., Iowa State University; M.B.A., University of Pennsylvania.

Education. Major Professor: Laurine E. Fitzgerald, Professor.

Thesis: A Study of the Emergence and Functioning of Academic Advising Centers Within Academic Units of Major Universities.

DOUGLAS LESLIE BAYER, Ph.D.

B.A., Knox College; M.S., Michigan State University.

Physics. Major Professor: Walter Benenson, Associate Professor.

Thesis: Inelastic Proton Scattering from ^{16}O at Bombarding Energies from 24.6 to 40.1 MeV.

JAMES WILLIAM BEDFORD, Ph.D.

B.S., M.S., Michigan State University.

Entomology. Major Professor: Matthew J. Zabik, Professor.

Thesis: Uptake, Metabolism, and Elimination of DDT and Dieldrin by Freshwater Mussels.

CAROLE ANN BEERE, Ph.D.

B.A., M.A., Michigan State University.

Education. Major Professor: Robert C. Craig, Professor.

Thesis: Development of an Instrument to Measure Early Elementary School Children's Attitudes Towards School.

JOHN WALTER BELL, Ph.D.

B.S.A., M.S., University of Arkansas.

Dairy. Major Professor: Roy S. Emery, Professor.

Thesis: Investigation of Some Factors Affecting Volatile Fatty Acid Transfer Across Rumen Epithelium in an In Vitro System.

ELDEAN BENNETT, Ph.D.

B.A., Brigham Young University; M.A., Michigan State University.

Communication. Major Professor: Erwin P. Bettinghaus, Professor.

Thesis: Manager Perceptions of Differences in High and Low Creative Personnel in Broadcasting Stations — Some Dimensions.

THOMAS D. BIDNER, Ph.D.

B.S., University of Illinois; M.S., Michigan State University.

Animal Husbandry. Major Professor: Robert A. Merkel, Professor.

Thesis: The Effects of Diethylstilbestrol-Methyltestosterone on Performance, Carcass Traits, Serum and Muscle Characteristics of Swine.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- DON EDWARD BIERMAN, Ph.D. B.A., M.A., George Washington University.
Geography. Major Professor: Ian M. Matley, Professor.
Thesis: The Function of the Oder River as an Artery of Transportation.
- DAVID RAND BISHOP, JR., Ph.D. B.A., M.A., University of Michigan.
Comparative Literature. Major Professor: Alfred E. Opubor, Assistant Professor.
Thesis: African Critics and African Literature: A Study of Critical Standards, 1947-1966.
- LEE EDWARD BLAKELY, Ph.D. B.S., University of Georgia; M.S., Michigan State University.
Food Science. Major Professor: Charles M. Stine, Professor.
Thesis: A Study of the Formation of Methyl Ketones and Free Fatty Acids in Quick Ripened Blue Cheese and Subsequent Losses During Dehydration.
- F. KEITH BLUE, Ph.D. A.B., A.M., Colorado State College.
Education. Major Professor: Floyd G. Parker, Professor.
Thesis: The Flint Community School Director: Analysis of Role Conflict and Expectations.
- STUART ALLAN BREMER, Ph.D. B.A., University of Michigan; M.A., Michigan State University.
Political Science. Major Professor: Rufus P. Browning, Associate Professor.
Thesis: National and International Systems: A Computer Simulation.
- CLARENCE ELLSWORTH BROWN, JR., Ph.D. B.E., Chicago Teachers College; M.A., Loyola University.
English. Major Professor: C. David Mead, Professor.
Thesis: The American Gambler Story in the Sentimental Tradition, 1794 to 1870.
- RAYMOND LUCAS BURICH, Ph.D. B.S., M.S., Kent State University.
Physiology. Major Professor: Burnell H. Selleck, Assistant Professor.
Thesis: Effect of Acute Metabolic Acidosis on Renal Glucogenesis.
- LAWRENCE WILLIAM BYRNES, Ph.D. B.A., M.A., Michigan State University.
Education. Major Professor: J. Geoffrey Moore, Professor.
Thesis: Ferris Institute as a Private School 1884-1952.
- JOHN NORMAN CAIN, Ph.D. B.A., Waynesburg College; M.A., University of Michigan.
Education. Major Professor: Peter G. Haines, Professor.
Thesis: Teacher Characteristics and Background Qualifications Significant to Maximum Teaching Effectiveness and Implications for Staffing Vocational Education Centers in Oakland County, Michigan.
- WARRICK LIVINGSTON CARTER, Ph.D. B.S., Tennessee State University; M.M., Michigan State University.
Music. Major Professor: Robert G. Sidnell, Associate Professor.
Thesis: Ethnic Music as a Source for the Musical Development and Enrichment of Culturally Different Students in General Music Classes.
- GERALD FRANCIS CAVANAGH, D.B.A. B.S., Case Institute of Technology; D.B.A., Xavier University; Ph.L., St. Louis University; M.Ed., Columbia University.
Business Administration (Personnel). Major Professor: Dalton E. McFarland, Professor.
Thesis: Black and White Workers' Attitudes in Three Industrial Plants: View From the Grassroots.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- EVERETT MARSTON CHANDLER, Ph.D. B.A., University of California.
Education. Major Professor: Louis C. Stamatakos, Associate Professor.
Thesis: Short-Term Orientation Programs for Freshmen: A Contrast Between Participants and Non-Participants in a Program at the California State Polytechnic College.
- WALTER GROVE CHAPPELL, Ph.D. B.A., University of Kansas; M.A., Michigan State University.
Education. Major Professor: Erling S. Jorgensen, Professor.
Thesis: A Model for Predicting the Unit Cost of Developing Self-Instructional Materials in Higher Education Biological and Physical Sciences.
- JOSEPH J. CHATHARAMPIL, Ph.D. U.Ph., St. Joseph College, India; S.T.B., Gregorian University, Italy; M.A., Wayne State University.
Education. Major Professor: Eldon R. Nonnamaker, Professor.
Thesis: Students' Perceptions of Their Academic Advisement at Michigan State University.
- JONAS CHENAULT, JR., Ph.D. B.S., Eastern Michigan University; M.S., University of Michigan.
Education. Major Professor: Wilbur B. Brookover, Professor.
Thesis: Mental Retardation as a Function of Race, Sex and Social Economic Status.
- HARVEY ELTING CLEARWATER, Ed.D. A.B., State University of New York; M.A., Michigan State University.
Education. Major Professor: Robert O. Nolan, Professor.
Thesis: A Study of Certain Factors in the Fatal Traffic Accidents of 16 Year Old Drivers in Michigan, 1967-1969.
- ROSILDA GHISLAINE CORMIER, Ph.D. B.S., Ottawa University; M.A., Michigan State University.
Education. Major Professor:
Thesis: Development of a Home Economics Curriculum for the Université de Moncton.
- SAMUEL TAGGART COWLING, Ph.D. A.B., Georgetown University; M.A., Brown University.
English. Major Professor: Arnold Williams, Professor.
Thesis: The Personages in the Major Narrative Works of John Gower.
- CARLTON GEORGE DAVIS, Ph.D. B.S., University of Nebraska; M.S., Michigan State University.
Agricultural Economics. Major Professor: Glenn L. Johnson, Professor.
Thesis: The Organization and Economics of Agricultural Research in the West Indies: Strategy Implications for the 1970's.
- MARC G. DE BACKER, Ph.D. License, State University of France.
Chemistry. Major Professor: James L. Dye, Professor.
Thesis: Metal-Amine and Solvated Electron Spectra and Reactions: Evidence for the Existence of M^- .
- DAVID JAMES DETEMPLE, Ph.D. B.S., Brigham Young University; M.A., Michigan State University.
Geography. Major Professor: James O. Wheeler, Associate Professor.
Thesis: A Space Preference Approach to the Determination of Individual Contact Fields in the Spatial Diffusion of Harvester Systems in Northeast Iowa.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- JOHN F. DEVLIN, Ph.D. B.S., Harpur College; M.S., Michigan State University.
Physics. Major Professor: Robert D. Spence, Professor.
Thesis: A Study of the Effect of Crystal-Field Anisotropy on Magnetically Ordered Systems.
- NOEMI DIAZ-SANTIAGO, Ph.D. B.S., University of Puerto Rico; M.S., Michigan State University.
Food Science. Major Professor: Pericles Markakis, Professor.
Thesis: Biochemical Effects of Irradiated Sugars on Human Cells in Culture.
- NEVILLE J. DOHERTY, Ph.D. B.S., University of Massachusetts.
Agricultural Economics. Major Professor: Glenn L. Johnson, Professor.
Thesis: The Economic Structure and Performance of the Medical Industry in Michigan's Grand Traverse Region.
- ROBERT LLOYD DRISCOLL, Ph.D. B.S., State University of New York; M.S., Alfred University.
Education. Major Professor: Robert R. Schmatz, Associate Professor.
Thesis: A Survey of Pupil Disruptive Behaviors as Viewed by Student Teachers.
- CARL JAMES DUTHLER, Ph.D. A.B., Calvin College.
Physics. Major Professor: Gerald L. Pollack, Professor.
Thesis: Dependence of the Helium II Film Transfer Rate on Pressure Head, Film Height, and Substrate.
- MILTON ESBITT, Ph.D. B.A., City College of New York; M.A., Michigan State University.
Economics. Major Professor: Wolfgang Paul Strassman, Professor.
Thesis: International Capital Flows and Domestic Economic Fluctuation: The United States During the 1830's.
- SUNDAY MATTHEW ESSANG, Ph.D. B.S., M.S., University of Ibadan.
Agricultural Economics. Major Professor: Glenn L. Johnson, Professor.
Thesis: The Distribution of Earnings in the Cocoa Economy of Western Nigeria: Implications for Development.
- CHRISTOPHER WARREN FAIRALL, Ph.D. B.S., Florida State University.
Physics. Major Professor: Jerry A. Cowen, Professor.
Thesis: The Anisotropic Antiferromagnet-Theory and Experiment.
- MICHAEL BRUCE FAIRBANKS, Ph.D. B.S., M.S., Michigan State University.
Physiology. Major Professor: Jack R. Hoffert, Associate Professor.
Thesis: The Importance of the Enzyme Carbonic Anhydrase in Ocular Oxygen Concentration in the Rainbow Trout (*Salmo gairdneri*).
- RALPH HAROLD FAULKINGHAM, Ph.D. B.A., Wheaton College.
Anthropology. Major Professor: Charles C. Hughes, Professor.
Thesis: Political Support in a Hausa Village.
- JOSE FONTAN PUEYO, Ph.D. B.A., Universidad Zaragoza; M.A., Michigan State University.
Education. Major Professor: James L. Page, Professor.
Thesis: A Review of Adult Educational Health Needs in Venezuela and the Possible Use of Instructional Radio, Television, Multi-Media and Methods to Help Meet the Defined Needs.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- ERROL JAMES FRECHETTE, Ph.D. B.P., LaVal University; M.A., University of Detroit.
Education. Major Professor: John E. Jordan, Professor.
Thesis: Attitudes of French and English Speaking Canadians Toward West Indian Immigrants: A Guttman Facet Analysis.
- JOHN P. FRY, Ph.D. B.S., Pennsylvania State University; M.A., Michigan State University.
Psychology. Major Professor: Robert H. Davis, Professor.
Thesis: The Effect of Student-Controlled Instruction on Learning.
- KENNETH LEON GAGALA, Ph.D. B.A., M.A., University of Detroit.
Economics. Major Professor: Charles P. Larrowe, Professor.
Thesis: Racism in the Building Trades.
- DENNIS STEWART GARN, Ph.D. B.S., Greenville College; M.A., Michigan State University.
English. Major Professor: Clyde E. Henson, Professor.
Thesis: Experience Disengaged: Henry James's Use of the Romance.
- JOE PERRY GENTRY, Ph.D. B.S., Oklahoma State University; M.S., University of Missouri.
Agricultural Engineering. Major Professor: Bill A. Stout, Professor.
Thesis: A Procedure for Rapidly Determining Transpiration Rates and Epidermal Permeabilities of Fruits.
- QUENTIN HENRY GESSNER, Ph.D. B.S., West Chester State College; M.A., University of Michigan; Ed.S., Michigan State University.
Education. Major Professor: Floyd G. Parker, Professor.
Thesis: A Study of the Perceptions of an Inter-University Center as Held by Alumni of the Participating Michigan Universities.
- THOMAS HENRY GIESKE, Ph.D. B.S., Xavier University; M.S., Michigan State University.
Physiology. Major Professor: William L. Frantz, Associate Professor.
Thesis: A Model for Pituitary Control of Osmoregulation in Relation to the Renal and Cutaneous Permeabilities to Sodium and Water in the Newt.
- JORGE GIMENEZ-DIXON, Ph.D. Ingeniero Agronomo, University of Buenos Aires; M.S., Michigan State University.
Agricultural Economics. Major Professor: Harold M. Riley, Professor.
Thesis: An Economic Analysis of Range Improvement in the Cattle Breeding Area of Buenos Aires Province.
- PAUL LOUIS GRASS, Ph.D. B.A., M.Ed., St. Mary's College.
Education. Major Professor: W. Harold Grant, Professor.
Thesis: Differential Effects of Short-Term Small-Group Interaction on the Behavioral Development of College Freshmen According to Personality Type.
- PETER HUMPHREY GRIGGS, Ph.D. B.A., Western Washington State College; M.S., Michigan State University.
Geology. Major Professor: Aureal T. Cross, Professor.
Thesis: Stratigraphy and Palynology of the Frontier Formation (Upper Cretaceous), Big Horn Basin, Wyoming.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

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| MELVYN HACKMEYER, Ph.D. | B.S., Brooklyn College.
Chemistry. Major Professor: James F. Harrison, Assistant Professor.
Thesis: Configuration Interaction Studies of Ground and Excited States of Polyatomic Molecules. |
| CHARLES JOHN HALL, Ph.D. | B.A., Emmanuel Missionary College; M.M., University of New Mexico.
Music. Major Professor: H. Owen Reed, Professor.
Thesis: The City in the Sea. |
| MALCOLM FRANK HALLIDAY, Ph.D. | B.A., Dartmouth College; M.Ed., University of Maryland.
Education. Major Professor: Richard L. Featherstone, Professor.
Thesis: An Investigation of Parent Attitudes and Teacher Morale in Relationship to Community Unrest. |
| MORTON OSWALD HAMILTON, Ph.D. | B.S.A., M.S., University of Toronto.
Food Science. Major Professor: Charles M. Stine, Professor.
Thesis: Rheology and Stability of Freeze-Dried Cultured Cream. |
| GERHARD JACOBUS HANNEMAN, Ph.D. | B.A., M.A., Michigan State University.
Communication. Major Professor: Bradley S. Greenberg, Associate Professor.
Thesis: Message Uncertainty as a Predictor of Arousal and Aggression. |
| DOUGLAS ALBERT HATZENBAHLER, Ph.D. | B.S., University of Rochester.
Chemistry. Major Professor: George E. Leroi, Associate Professor.
Thesis: Laser Excited Fluorescence of I ₂ , Raman Spectra of Periodate Crystals, and Raman Spectra of Crystalline Acetylene and Deuterated Acetylene. |
| ZENIA JEAN LUKIANCHUK HAWRYSH, Ph.D. | B.S., University of Alberta; M.S., Michigan State University.
Foods and Food Science. Major Professors: Dena Cederquist, Professor; Charles M. Stine, Professor.
Thesis: The Retention of Volatile Monocarbonyl Compounds in Natural Model Systems. |
| OMAR KEITH HELFERICH, D.B.A. | B.S., M.S., M.B.A., University of Michigan.
Business Administration (Management). Major Professors: Richard F. Gonzalez, Professor; Donald J. Bowersox, Professor.
Thesis: Development of a Dynamic Simulation Model for Planning Physical Distribution Systems: Formulation of the Mathematical Model. |
| GERALD DALE HESS, Ph.D. | A.B., Messiah College; M.S., Michigan State University.
Physiology. Major Professor: Gail D. Riegle, Associate Professor.
Thesis: Effects of Chronic ACTH Stimulation, Gonadal Hormones, Thyroidal Hormone Treatment and Age on Adrenocortical Function of the Rat. |
| JAMES LESLIE HILL, Ph.D. | B.S., M.S., University of Alberta.
Zoology. Major Professor: John A. King, Professor.
Thesis: Space Utilization of Peromyscus: Social and Spatial Factors. |
| JOHN JOSEPH HORAN, Ph.D. | A.B., M.A., University of Detroit.
Education. Major Professor: Richard G. Johnson, Associate Professor.
Thesis: The Effect on Weight Reduction of Coverant Conditioning Through a Self-Management Application of the Premack Principle. |

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- JOHN EDWARD HOSTETLER, Ph.D. M.S., Michigan State University.
Agricultural Economics. Major Professor: A. Allan Schmid, Professor.
Thesis: Sensitivity Analysis of Selected Linear Programming Assump-
tions: A Study of the Stability of Agricultural Projections in River
Basin Research.
- JAMES RICHARD HUFFMAN, Ph.D. B.A., Harvard College; M.A., Michigan State University.
English. Major Professor: Clyde E. Henson, Professor.
Thesis: The Sense of the Past in Henry James.
- JOHN MACK HUITE, Ph.D. B.S., M.S., Auburn University.
Agricultural Economics. Major Professor: Harold Riley, Professor.
Thesis: Number, Size, and Location of Beef Slaughter Plants in
Michigan.
- IRMGARD SEIL IMMEL, Ph.D. B.A., Kent State University; M.A., Northwestern University.
German, Language and Literature. Major Professor: Mark O. Kistler,
Professor.
Thesis: *Sturm-und-Drang-Elemente in Anton Reiser.*
- OLAF ISACHSEN, Ph.D. T.E., Textile Institute; M.B.A., Harvard University.
Education. Major Professor: Vandel C. Johnson, Professor.
Thesis: Proposal for a Model and Procedure for the Allocation of
Financial Resources in a College of Education Within a Complex
University System.
- TURNER TIMINIPRE ISOUN, Ph.D. B.S., D.V.M., Michigan State University.
Pathology. Major Professor: Charles K. Whitehair, Professor.
Thesis: Pathologic and Biochemical Influences of a Viral Enteric In-
fection in Protein-Calorie Malnutrition in Pigs.
- ETHAN B. JANOVE, Ph.D. B.A., University of Illinois; M.S., Northern Illinois University.
Education. Major Professor: Samuel A. Moore, II, Professor.
Thesis: Duties Performed by Paraprofessionals and the Relationship
of Self-Concept and Dogmatism.
- ANDREW TIMOTHY JEFCHAK, Ph.D. A.B., Indiana University; M.A., DePaul University.
English. Major Professor: Joseph J. Waldmeir, Professor.
Thesis: Marital and Familial Relationships in the Post-World War II
American Novel.
- SHIRLEY MAE JOHNSON, Ph.D. B.S., Northern Michigan University; M.S., Michigan State University.
Physiology. Major Professor: John E. Nellor, Professor.
Thesis: Influence of the Adrenal Glands, Ovaries, Testes and Age on
the Eosinophilic and Basophilic Granulated Cell Numbers of the Rat
Intestine.
- RICHARD R. KNIGHT, Ph.D. B.S., M.A., Michigan State University.
Psychology. Major Professor: Lauren Harris, Associate Professor.
Thesis: Incongruity: The Effect of Systematically Altered Drawings
on Adults' Ratings of Incongruity, Unfamiliarity, and Related Dimen-
sions.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

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| CHARLES FRANK KOVACIK, Ph.D. | B.S., M.S., Northern Illinois University.
Geography. Major Professor: Daniel Jacobson, Professor
Thesis: A Geographical Analysis of the Foreign-Born in Huron, Sanilac, and St. Clair Counties of Michigan with Particular Reference to Canadians: 1850-1880. |
| ALWIN WILLIAM KULENKAMP, Ph.D. | B.S., M.S., Michigan State University.
Poultry Science. Major Professor: Theo H. Coleman, Professor.
Thesis: The Effects of Intensive Inbreeding (Brother X Sister) on Various Traits in Japanese Quail (<i>Coturnix Coturnix Japonica</i>). |
| ROBERT BRUCE LACEY, Ph.D. | A.B., Albion College; M.S., Michigan State University.
Microbiology and Public Health. Major Professor: Charles H. Cunningham, Professor.
Thesis: The Use of Serially Propagated African Green Monkey Kidney Cells in the Detection of a Latent Newcastle Disease Virus in Chicken Embryos. |
| DAVID RONALD LEECE, Ph.D. | B.S., M.S., University of Sidney.
Horticulture. Major Professor: Alvin L. Kenworthy, Professor.
Thesis: Absorption and Utilization of Foliar-Applied Nitrogen in <i>Prunus</i> spp. |
| ERNESTO SATURNINO LIBOREIRO, Ph.D. | B.S., University of the South; M.S., Michigan State University.
Agricultural Economics. Major Professor: Dale E. Hathaway, Professor.
Thesis: Effects of the European Economic Community Agricultural Policies on Argentine Exports of Beef. |
| MARTHA KATHERINE LORENZ, Ph.D. | B.A., Pacific Union College; M.S., Union of Nebraska.
Home Economics Education. Major Professor: Rosalind B. Mentzer, Professor.
Thesis: A Descriptive Study of the Backgrounds, Attitudes, and Values of Home Economics Students at Michigan State University. |
| GEORGE EDWARD LOTT, JR., Ph.D. | B.A., The College of William and Mary; M.A., Michigan State University.
Speech and Theatre. Major Professor: David C. Ralph, Professor.
Thesis: The History of Radio Station WTAR: The Pioneer Years, 1923-1934. |
| GLEN PEIRCE LUMIS, Ph.D. | B.S., Pennsylvania State University; M.S. Michigan State University.
Horticulture. Major Professor: Roy A. Mecklenburg, Associate Professor.
Thesis: Winter Hardiness of Evergreen Azalea (<i>Rhododendron</i> cv.) Flower Buds. |
| WILLIAM JOSEPH LYNAM, Ph.D. | B.A., Albion College; M.A., Michigan State University.
Education. Major Professor: Max Raines, Professor.
Thesis: A Study of the Administrative Competencies Needed by the Community College Academic Dean and a Model of Their Translation into Behavioral Statements Related to Administrative Training Experiences. |

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- E. JEROME MAAS, Ph.D. B.S., Loyola University; M.S., Illinois Institute of Technology. Chemistry. Major Professor: William H. Reusch, Professor. Thesis: A Study of Free Radical 1,2-Acyl Migrations.
- ERNEST NUNCIO MANNINO, Ph.D. A.B., Harvard College; M.A., Teachers College of Boston. Education. Major Professor: Fred Vescolani, Professor. Thesis: The Overseas Education of American Elementary and Secondary School Pupils with Application for American Sponsored Schools Overseas: A Diagnosis and Plan for Action.
- EDWARD JOSEPH MARIEN, Ph.D. B.S., Indiana Central College; M.B.A., Indiana University. Business Administration (Transportation). Major Professor: Donald J. Bowersox, Professor. Thesis: Development of a Dynamic Simulation Model for Planning Physical Distribution Systems: Formulation of the Computer Model.
- IAN McCLYMONT, Ph.D. B.A., McMaster University; M.A., Michigan State University. History. Major Professor: Harry J. Brown, Professor. Thesis: Canadian Expansionism, 1903-1914.
- VINCENT MURRY MCGUGAN, Ph.D. A.B., M.A., Western Michigan University. Education. Major Professor: Fred Vescolani, Professor. Thesis: The Development of Guidelines Through Which the Adequacy Concept in Designating United States Government Sponsored Schools May Be Examined.
- JOSEPH ALBERT McHUGH, Ph.D. B.S., College of the Holy Cross; M.B.A., Creighton University. Business Administration (Accounting). Major Professor: Gardner M. Jones, Professor. Thesis: The Derivation of Learning Task Hierarchies and Instructional Objectives for Training United States Air Force Base-Level Responsibility Center Managers and Resource Advisors.
- GERALD ALFRED McINTOSH, Ph.D. B.S., Central State University; M.A., Eastern Michigan University. Education. Major Professor: Louis Romano, Associate Professor. Thesis: A Study of the Perceptions of Black and White College Freshmen at Michigan State University Toward the University Environment.
- PATRICK BRUCE McKENZIE, Ph.D. B.S., M.S., Kansas State University. Business Administration (Accounting). Major Professor: George C. Mead, Professor. Thesis: The Relative Usefulness to Investors of Price-Level Adjusted Financial Statements: An Empirical Study.
- ELAINE MARIANNE McLEVIE, Ph.D. B.A., M.A., Victoria University of Wellington. English. Major Professor: Virgil J. Scott, Professor. Thesis: The Hero in the Post World War II Novel: Some Differences of Concept in the Works of English and American Novelists.
- ANNE M. McMAHON, Ph.D. B.A., University of Portland; M.A., Michigan State University. Sociology. Major Professor: Santo F. Camilleri, Professor. Thesis: Voluntary Participation in Formal Groups.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

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|--------------------------------|---|
| ULRICH KARL MELCHER, Ph.D. | B.S., University of Chicago.
Biochemistry. Major Professor: Joseph E. Varner, Professor.
Thesis: Protein Release by Barley Aleurone Layers and Metabolism of Puromycin by Yeast Cells. |
| JAMES BURR MENSE, Ph.D. | B.S., Iowa State University; M.S., University of Oklahoma.
Fisheries and Wildlife. Major Professor: Niles R. Kevern, Professor.
Thesis: Relation of Density to Brown Trout Movement in a Michigan Stream. |
| JAMES EDWARD MEULENDYKE, Ph.D. | B.S., Northwestern University; M.A. University of Michigan; Ed.S., Michigan State University.
Education. Major Professor: James E. Heald, Professor.
Thesis: Educational Leadership in a Time of Crisis, 1932-1940. |
| GEORGE JOSEPH MURPHY, Ph.D. | B.A., University of Manitoba; C.A., Canadian Institute of Chartered Accountants.
Business Administration (Accounting). Major Professor: Charles J. Gaa, Professor.
Thesis: The Evolution of Selected Annual Corporate Financial Reporting Practices in Canada: 1900-1970. |
| KEITH EDWARD NIELSEN, Ph.D. | B.A., Alma College; M.A., Stanford University.
Theatre. Major Professor: Farley P. Richmond, Assistant Professor.
Thesis: Two Uses of Theatre as a Communication Mode for the Study of Selected Cultural Concepts of India. |
| GEORGE PETER NILLES, Ph.D. | B.S., University of Minnesota; M.S., Michigan State University.
Chemistry. Major Professor: Robert D. Schuetz, Professor.
Thesis: An Investigation of the Synthesis and Base Induced Rearrangement of Some Dithienyl Diketones. |
| GORDON DOUGLAS NORTHROP, Ph.D. | A.B., Wheaton College; M.A., University of Michigan.
Anthropology. Major Professor: Iwao Ishino, Professor.
Thesis: Pan-Indianism in the Metropolis: A Case Study of an Emergent Ethno-Syncretic Revitalization Movement. |
| SONDE NDUBEZE NWANKPA, Ph.D. | B.S., Hull University; M.S., Michigan State University.
Mathematics. Major Professor: Leroy M. Kelly, Professor.
Thesis: Generalised Sylvester Gallai Configurations. |
| WILLIAM JOHN O'BRIEN, Ph.D. | B.S., Gettysburg College.
Zoology. Major Professor: Donald J. Hall, Associate Professor.
Thesis: The Effects of Nutrient Enrichment on the Plankton Community in Eight Experimental Ponds. |
| URBAN THEODORE OEN, Ph.D. | B.S., M.S., The Ohio State University.
Education. Major Professor: H. Paul Sweany, Professor.
Thesis: An Experimental Study Designed to Evaluate the Effectiveness of an Individualized Learning Method of Instruction When Compared to the General Lecture-Discussion Method of Instruction. |
| PAUL JOSEPH O'GRADY, Ph.D. | B.A., M.A., Assumption University of Windsor.
Psychology. Major Professor: James L. Phillips, Associate Professor.
Thesis: Attribution of Strategies in the Prisoner's Dilemma Game: A Symbolic Interaction Approach. |

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- JARRELL ARLEN O'KELLEY, Ph.D. B.A., Sterling College; M.A., University of Denver.
English. Major Professor: Elwood P. Lawrence, Professor.
Thesis: Marriage as a Metaphor of Commitment in the Long Poems of Arthur Hugh Clough.
- LEONARD WILLIAM OTT, Ph.D. B.S., Wisconsin State University; M.M., Michigan State University.
Music. Major Professor: Paul O. Harder, Professor.
Thesis: An Analysis of the Later Orchestral Style of Wallingford Riegger.
- KAZUHIRO OYA, Ph.D. M.S., University of Hawaii.
Soil Science. Major Professor: John C. Shickluna, Professor.
Thesis: Evaluation of Potassium Availability of Four Michigan Soils.
- ERDAL PANAYIRCI, Ph.D. B.S., M.S., Technical University of Istanbul.
Electrical Engineering. Major Professor: Richard C. Dubes, Professor.
Thesis: Bayesian Decision Making and Learning for Continuous-Time Markov Systems.
- DIBAKAR PANIGRAHI, Ph.D. B.V.Sc., Orissa Veterinary College, India; M.S., Michigan State University.
Pathology. Major Professor: Glenn L. Waxler, Professor.
Thesis: The Effect of Neonatal Thymectomy and X-Irradiation on the Lesions of Tuberculosis in Chickens.
- GEORGE RALPH PARKER, Ph.D. B.S., M.S., Oklahoma State University.
Forestry. Major Professor: Gerhardt Schneider, Associate Professor.
Thesis: The Structure of a Swamp Community in Northern Michigan and Its Reaction to Partial Drainage.
- BRIAN MALCOLM PETRIE, Ph.D. B.S., M.A., University of Alberta.
Education. Major Professor: Wilbur B. Brookover, Professor.
Thesis: Physical Activity, Games, and Sport: A System of Classification and an Investigation of Social Influences Among Students of Michigan State University.
- DUANE DENNIS PETTERSEN, Ph.D. B.S., Eastern Montana College; M.A., Montana State College.
Communication. Major Professor: Erwin P. Bettinghaus, Professor.
Thesis: A Sociolinguistic Study of Elaborated and Restricted Code Systems.
- RICHARD EARL PHILLIPS, Ph.D. B.S., M.S., Cornell University.
Agricultural Engineering. Major Professor: Merle L. Esmay, Professor.
Thesis: A Systems Analysis of Summer Environment for Laying Hens.
- WILLIAM LUCAS PICKLES, Ph.D. B.S., B.A., University of Texas; M.S., Michigan State University.
Physics. Major Professor: Edwin Kashy, Professor.
Thesis: Elastic Scattering and Reactions in the Bombardment of ^{14}N by 20 MeV Deuterons.
- STEPHEN WILLIAM PORGES, Ph.D. B.A., Drew University; M.A., Michigan State University.
Psychology. Major Professor: Hiram E. Fitzgerald, Assistant Professor.
Thesis: Respiratory and Heart Rate Indices of Reaction Time.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- EMERSON LUCINE POTTER, Ph.D. B.S., Michigan State University; M.S., The Ohio State University. Animal Husbandry. Major Professor: Duane E. Ullrey, Professor. Thesis: Amino Acid Studies in the Ruminants: Investigation of a Method for Determining the Limiting Amino Acids.
- HARVEY GRAHAM PURCHASE, Ph.D. B.Sc., University of the Witwatersrand, South Africa; B.V.Sc., University of Pretoria, South Africa; M.R.C.V.S., Royal College of Veterinary Surgeons; M.S., Michigan State University. Microbiology and Public Health. Major Professor: Charles H. Cunningham, Professor. Thesis: Marek's Disease: Virus-Host Cell Relationships *In Vitro* and *In Vivo*, and Biological Markers for Cloned Preparations of the Virus and a Herpesvirus of Turkeys.
- NORMAN ALAN RASULIS, Ph.D. B.S., University of Wisconsin; M.A., Michigan State University. English. Major Professor: James L. Hill, Associate Professor. Thesis: Dreams and the Redemptive Vision in Shelley's Major Poetry.
- GEORGE RENNISON REED, Ed.D. A.B., Albion College; M.A., Western Michigan University. Education. Major Professor: William V. Hicks, Professor. Thesis: The Contributions of Thomas Milton Carter to Teacher Education, Albion College, 1923-1962.
- GERARD ANTHONY REIDY, Ph.D. B.S., University of Dublin; M.S., Michigan State University. Food Science and Agricultural Engineering. Major Professor: Dennis R. Heldman, Associate Professor. Thesis: Relationships Between Engineering and Texture Parameters for Low and Intermediate Moisture Foods.
- THOMAS F. REIF, Ph.D. B.A., University of Michigan; M.A., Michigan State University. Psychology. Major Professor: James L. Phillips, Associate Professor. Thesis: Changes in Children's Personal and Social Behavior as a Result of Interaction with Trained Undergraduates.
- GEORGE BERNARD ROBECK, Ph.D. B.A., M.A., Pennsylvania State University. Communication. Major Professor: Verling C. Troidahl, Professor. Thesis: The Influence of Design Symmetry and Contour on Eye Fixations and Judgments of Perceived Complexity, Interestingness and Pleasingness.
- HENRY ARTHUR ROBITAILLE, Ph.D. B.S., University of Maryland; M.S., Michigan State University. Horticulture. Major Professor: Robert F. Carlson, Professor. Thesis: The Relationship of Endogenous Hormones to Growth Characteristics and Dwarfing in *Malus L.*
- THOMAS ROBERT RODGERS, Ph.D. B.S., College of St. Thomas. Chemistry. Major Professor: Harold Hart, Professor. Thesis: Part I: Stereochemistry of the Rapid Equilibration of Protonated Bicyclo[3.1.0]Hexenones. Part II: Control of the Stereochemistry of 2,5-Cyclohexadienone Photoisomerization by Steric Factors. Part III: The Synthesis and Photorearrangement of 1,6,8,8,9,10-Hexamethyltricyclo[2.2.4.0^{2,5}]Deca-3,9-Diene-7-One and Its Derivatives.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- JOHN R. ROSENAU, Ph.D. B.S., University of Wisconsin.
Agricultural Engineering. Major Professor: Fred W. Bakker-Arkema, Associate Professor.
Thesis: Heat and Mass Transfer in Onions.
- HARLEY G. ROTH, Ph.D. B.A., M.A., University of the Pacific.
Education. Major Professor: Louis Romano, Associate Professor.
Thesis: Values and Value Systems in the Selection of Leaders in Education.
- CAROLE ANN SACK, Ph.D. B.S., University of Michigan.
Zoology. Major Professor: Herman M. Slatis, Professor.
Thesis: The Interaction of Some Wing Mutants of *Drosophila Melanogaster*.
- LAURENCE WILLIAM SAIN, Ph.D. B.S., Northern Michigan University; M.A., University of Michigan.
Education. Major Professor: William A. Mann, Professor.
Thesis: A Study of Selected Factors Associated with High School Driver Education Programs in the Upper Peninsula of Michigan.
- WILLIAM C. SASS, Ph.D. B.A., Sacramento State College.
Chemistry. Major Professor: Gerasimos J. Karabatsos, Professor.
Thesis: An Automated Analysis of Secondary Isotope Effects in Aqueous Alkaline Ester Hydrolysis.
- RICHARD FRANK SAUTER, D.B.A. B.S., M.B.A., Michigan State University.
Business Administration (Marketing). Major Professor: William Lazer, Professor.
Thesis: Demand Estimation in a Public Utility: An Empirical Model.
- NORMAN JAMES SCHLAFMANN, Ph.D. B.A., Sioux Falls College; B.D., North Baptist Theological Seminary; M.A., Michigan State University.
Education. Major Professor: Eldon R. Nonnamaker, Professor.
Thesis: An Examination of the Influence of the State Legislature on the Educational Policies of the Constitutionally Incorporated Colleges and Universities of Michigan through Enactment of Public Acts from 1851 through 1970.
- PETER J. SCHMIDT, Ph.D. B.A., M.A., Michigan State University.
Economics. Major Professor: Jan Kmenta, Professor.
Thesis: Regression Analysis with Second-Order Autoregressive Disturbances.
- HERBERT NICK SCHOTT, Ph.D. B.S., University of California.
Chemistry. Major Professor: Peter J. Wagner, Professor.
Thesis: Part I: The Efficiency of Triplet Energy Transfer From Ketones to Rare Earth Ions. Part II: The Nature of the Photoreactive State in P-Methoxyphenyl Alkyl Ketones.
- AHMAD SIDAWI, Ph.D. B.A., M.A., Michigan State University.
Education. Major Professor: Wilbur B. Brookover, Professor.
Thesis: Self-Concept of Ability and School Achievement in Lebanon.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- EDWARD JULIUS SIEGEL, Ph.D. B.S., City University of New York; M.S., University of Michigan. Metallurgy. Major Professor: Gabor Kemeny, Associate Professor. Thesis: Five-Fold d-Electron Degeneracy in the Hubbard Model of Transition Metal Magnetism.
- SUKHBIR SINGH, Ph.D. B.Sc., G.G.M. Sc. Col., India; B.E., University of Jabalpur; M.S., College of Engineering at Poona. Electrical Engineering. Major Professor: Peter D. Fisher, Assistant Professor. Thesis: Current Saturation Mechanism in Field-Effect Transistors.
- ROGER ALAN SKOLNIK, Ph.D. B.A., Miami University; M.A., Michigan State University. Communication. Major Professor: Verling C. Troidahl, Professor. Thesis: Alienation and Attitudes Toward Radio.
- ANNA BARBARA CRUMPLER SMART, Ph.D. B.A., Arizona State College; M.A., University of Washington. Education. Major Professor: Charles V. Mange, Professor. Thesis: A Proposed Special Education Program for the State of Alaska with Emphasis on Rural Schools.
- FLOYD DALE SMITH, Ph.D. B.A., Southern Illinois University; M.A., Michigan State University. Education. Major Professor: William A. Mann, Professor. Thesis: Blood Alcohol Level and Other Selected Factors as Indicators of the Problem Drinking Driver.
- HANLEY KERFOOT SMITH, Ph.D. B.S., Tulane University; M.S., Texas A & M University. Fisheries and Wildlife. Major Professor: Leslie W. Gysel, Professor. Thesis: The Biology, Wildlife Use and Management of Sumac in the Lower Peninsula of Michigan.
- H. ROGER SMITH, Ph.D. A.B., Antioch College; M.A., Eastern Michigan University. Geography. Major Professor: Ian M. Matley, Professor. Thesis: Regional Growth, Central Place Development, and Functional Change: River Bend Area, Minnesota.
- S. DAVIS SMITH, Ph.D. B.S., M.S., Wayne State University. Education. Major Professor: Herbert C. Rudman, Professor. Thesis: The Role of Dogmatism in Teacher Evaluation.
- ROBERT BRUCE SPANGENBERG, Ph.D. B.S., Michigan State University; M.D., University of Michigan. Physiology. Major Professor: W. D. Collings, Professor. Thesis: Blood Pressure Changes and Renin Activity Associated with Renal Arteriovenous Fistulae in the Dog.
- GEORGE LESTER STABY, Ph.D. B.S., University of Connecticut; M.S., Michigan State University. Horticulture. Major Professor: August A. DeHertogh, Professor. Thesis: Terpene Biosynthesis in Cell-Free Systems from Wedgwood Iris and *Tulipa Gesneriana* L. and Its Relation to Bulb Growth and Development.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

ROLAND GLENN STANLEY, Ph.D.

B.S., M.A., Western Michigan University.
Education. Major Professor: Donald A. Burke, Associate Professor.
Thesis: Children at the Kalamazoo State Hospital 1859-1970: A Description of the Population in Relation to Duration of Treatment, 1961-1967.

ROBERT ST-LOUIS, Ph.D.

B.A., Seminaire de Sherbrooke; M.C., University of Montreal.
Agricultural Economics. Major Professor: Robert D. Stevens, Associate Professor.
Thesis: A Simulation Analysis of Planned Dairy Farm Development in Eastern Quebec.

EUGENE DONALD TATE, Ph.D.

B.A., Hamline University; B.D., Garrett Theological Seminary; M.A., Northwestern University.
Communication. Major Professor: Gerald R. Miller, Professor.
Thesis: A Comparison of the Relative Immunizing Effect of Counter-attitudinal Advocacy with the Passive Reception of a Persuasive Message.

HOWARD SHUIRMAN TEITELBAUM, JR.
Ph.D.

B.S., California State Polytechnic College; M.A., Michigan State University.
Education. Major Professor: Keith Anderson, Associate Professor.
Thesis: A Descriptive Study of Selected Pupil Disruptive Behaviors.

ADELBERT FRED THOMPSON, Ph.D.

B.S., M.A., East Tennessee State College.
Education. Major Professor: Robert O. Nolan, Professor.
Thesis: The Effectiveness of the Mann Inventory in Classifying Adult Drivers into Accident-Violation Experience Categories and Its Relationship to Past Driver Performance.

CHARLES WILBERT TOWNSEL, Ph.D.

B.S., Wayne State University; M.A., University of Michigan.
Education. Major Professor: Louis Romano, Associate Professor.
Thesis: A Self-Concept and Mental Health as a Function of Academic Achievement.

RAYMOND EVERET TRENT, Ph.D.

B.S., M.S., Purdue University.
Mechanical Engineering. Major Professor: Joachim E. Lay, Professor.
Thesis: A Comprehensive Digital Computer Analysis of the Positive Displacement Brayton Cycle.

EDGAR ERNEST TWEDT, Ph.D.

B.D., State Teachers College, Pennsylvania; M.A., Michigan State University.
Education. Major Professor: Carl H. Gross, Professor.
Thesis: The Controversy Among Lutherans in the United States Over Public Funds to Church Schools, 1960-1969.

ROBERT ALBERT ULRICH, Ph.D.

B.S., M.S., State University of New York, College at Buffalo.
Education. Major Professor: Robert Nolan, Professor.
Thesis: Developing a Justification for the Inclusion of a Comprehensive Safety Education Program in the Public Schools of New York State.

ANTONE CORNELIUS VAN VLIET, Ph.D.

B.S., M.S., Oregon State University.
Forestry. Major Professor: Otto Suchsland, Professor.
Thesis: The Sawmill Manager: His Nature and His Time.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

EDWARD CHARLES VARSA, Ph.D.

B.S., Southern Illinois University; M.S., University of Illinois.
Soil Science. Major Professor: Arthur R. Wolcott, Professor.
Thesis: The Use of Soil and Petiole Tests for Detecting Residual Nitrogen and for Predicting Responses of Sugar Beets (*Beta vulgaris*) to Nitrogen Fertilization.

THOMAS J. VAUGHAN, Ph.D.

B.S., Central Michigan University; M.A., Western Michigan University.
Education. Major Professor: Louis Romano, Associate Professor.
Thesis: A Study of the Relationship Between Shortened School Day Sessions in Michigan Public Schools and Selected Financial Characteristics.

VEDANAND, Ph.D.

B.S., M.S., University of Allahabad.
Business Administration (Marketing). Major Professor: William J. E. Crissy, Professor.
Thesis: Role of Product Charisma in Buying Behavior: An Analysis of Black and White Ownership of Cadillacs.

HARISH LAXMINARAYAN VERMA, Ph.D.

B. Tech., Indian Institute of Technology; M.S., M.B.A., Michigan State University.
Business Administration (Management). Major Professor: Richard Gonzalez, Professor.
Thesis: Development of a Joint Order Inventory Model.

JAMES GERALD VERTREES, Ph.D.

B.S., M.S., Purdue University.
Agricultural Economics. Major Professor: Henry E. Larzelere, Professor.
Thesis: Evaluation of Alternative Egg Distribution Channel Systems.

JAMES LEONARD VOOGT, Ph.D.

B.S., Michigan Technological University; M.S., Michigan State University.
Physiology. Major Professor: Joseph Meites, Professor.
Thesis: Effects of Exogenous Prolactin and Growth Hormone on Their Secretion by the Pituitary and on Other Hormones.

OSWALDO VOYSEST VOYSEST, Ph.D.

Ing. Agronomo Agrarian, University LaMolina, Peru; M.S., University of California.
Crop Science. Major Professor: M. Wayne Adams, Professor.
Thesis: An Attempt to Overcome the Yield-Dampening Effect of Negative Correlations Among Yield Components in Beans (*Phaseolus vulgaris* L.).

FRANCIS T. WALLACE, Ph.D.

B.A., M.A., University of South Florida.
Education. Major Professor: Peter G. Haines, Professor.
Thesis: Expressed Concerns and Expectations of Students, School Personnel and Businessmen in an Emerging Partnership Concept Among Business, Industry and Education.

RICHARD GENE WALTER, Ph.D.

B.S., M.S., University of Maryland.
Business Administration (Finance). Major Professor: Roland I. Robinson, Professor.
Thesis: The Effects of Corporate Financial Policy on Stockholder Expectations.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

- SAMUEL LO-TUNG WANG, Ph.D. B.S., National Taiwan University; M.S., Michigan State University. Food Science. Major Professor: Clifford L. Bedford, Professor. Thesis: Glycoalkaloid and Demethyl Sterol Content in Some Potato Varieties and Clones.
- CONSTANCE WALTZ WEAVER, Ph.D. B.A., M.A., Indiana University. English. Major Professor: William W. Heist, Professor. Thesis: Analyzing Literary Representations of Recent Northern Urban Negro Speech: A Technique with Application to Three Books.
- DOROTHY LOUISE WEST, Ph.D. B.S., M.Ed., Pennsylvania State University. Education. Major Professor: Henry Kennedy, Professor. Thesis: Unique Contributions of the Vocational Home Economics Teacher Educator to a Student Teaching Program Coordinated by Other Teacher Educators (An Exploratory Study).
- BETTE C. WHITE, Ph.D. B.A., M.Ed., North Texas State University. Education. Major Professor: Laurine E. Fitzgerald, Professor. Thesis: The Perceptions of Campus Resource Personnel Held by Undergraduate Women at Three Private Colleges.
- ROSS MAYNARD WHITMAN, Ph.D. B.A., M.A., M.S., California State College. Education. Major Professor: John E. Jordan, Professor. Thesis: Guttman Facet Analysis of Attitude-Behavior of Psychiatric Patients and Normals Toward the Mentally Ill: Content, Structure and Determinants.
- LIEK WILARDJO, Ph.D. B.Sc., Gama University; M.S., Michigan State University. Physics. Major Professor: Paul M. Parker, Professor. Thesis: A Complete Fourth-Order Vibration-Rotation Hamiltonian of H²O-type Molecules.
- LOIS QUICK WILLIAMS, Ph.D. B.A., University of Minnesota; M.A., Michigan State University. Education. Major Professor: J. Martin Clessen, Professor. Thesis: Reading Ability and the Effects of Perceptual Mode on Learning and Recall of Paired Associates with Acoustic or Graphic Similarity.
- WILLIE SAMUEL WILLIAMS, Ph.D. A.B., University of Wichita; M.Ed., University of Cincinnati. Education. Major Professor: John E. Jordan, Professor. Thesis: Attitudes of Black and White Policemen Toward the Opposite Race.
- SUE ANN WISENBERG, Ph.D. B.S., Ball State University; M.A., Michigan State University. Education. Major Professor: Clessen J. Martin, Professor. Thesis: Initial and Delayed Retention of Relevant and Incidental Information From a Prose Passage Presented Aurally to Trainable Mental Retardates.
- GENE C. H. YANG, Ph.D. B.S., Tunghai University; M.S., Northwestern State University. Microbiology and Public Health. Major Professor: Robert R. Brubaker, Assistant Professor. Thesis: Inhibition of the Synthesis of Deoxyribonucleic Acid in *Yersinia pestis* During Production of Virulence Antigens.

SCHOOL FOR ADVANCED GRADUATE STUDIES

CANDIDATES FOR THE DOCTORAL DEGREES — FALL TERM, 1970 (Continued)

WALTER DONALD YODER, Ph.D.

B.A., M.A., Michigan State University.
Education. Major Professor: James L. Page, Professor.
Thesis: The Application and Evaluation of a Pilot Study on the Effect of a Self-Instructional Unit Concerning Basic Design Principles for Selected Non-Art Majors.

CYRUS WILLIAM YOUNG, Ph.D.

B.A., Wayne State University; M.A., Michigan State University.
Geography. Major Professor: James O. Wheeler, Associate Professor.
Thesis: Transportation Network Development: The Railroad Network of Southern Michigan.

RICHARD C. YOUNGS, Ph.D.

B.A., Bowling Green State University; M.A., University of Michigan.
Education. Major Professor: William J. Walsh, Professor.
Thesis: Creativity Materials for the Middle Grades: Their Development and Efficacy.

CANDIDATES FOR EDUCATIONAL SPECIALIST DEGREES — FALL TERM, 1970

DANIEL LEE BALLAST, Ed.S.

A.B., Calvin College; M.A., Michigan State University.
Education. Major Professor: Bob B. Winborn, Professor.

NILA JEAN DEGNER, Ed.S.

B.S., Andrews University; M.A., Michigan State University.
Education. Major Professor: Elaine F. Uthe, Assistant Professor.

ROBERT ERVIN DITTMAN, Ed.S.

B.S., M.A., Michigan State University.
Education. Major Professor: Harvey Clarizio, Associate Professor.

CHARLES PATRICK SILAS, Ed.S.

B.A., Duke University; M.A., Michigan State University.
Education. Major Professor: Charles A. Blackman, Professor.

EUPHA ELVIRA SKILLMAN, Ed.S.

B.S., Harding College; M.A., Central Michigan University.
Education. Major Professor: Norma Bobbitt, Professor.

MERRILL LEE SMITH, Ed.S.

B.S., M.A., Michigan State University.
Education. Major Professor: Harvey F. Clarizio, Associate Professor.

JOHN FRANCIS SPRINGER, Ed.S.

B.S., University of Michigan; M.A., Michigan State University.
Education. Major Professor: Dale V. Alam, Associate Professor.

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

LAWRENCE L. BOGER, DEAN

GRADUATED SUMMER TERM 1970

DEGREE OF
MASTER
OF SCIENCE

Agricultural Economics

Scott Frederick Cristman
Nair K. Damodaran
Panida Jongputisiri
Chaiwat Konjing
Ming-Wu Wu

Biochemistry

Jeffrey Bryan Stevens

Building Construction

John Paul Bailey

Crop Science

Wayne Leroy Haag
David P. Martin
Charles Frederick Stolp

Dairy

Karingattil Sam Varghese

Fisheries and Wildlife

Kenneth Lee Stromborg

Food Science

Gary Thomas Blair
Decio Antonio Travaglini

Forestry

Bruce Alwin Chaffin
Truls Johan Gram
Krishna Bahadur Malla
Somchit Pongpangan

Horticulture

Harvey James Belter
Robert Wesley Daniels

Packaging

Patricia Ann Orsay

Resource Development

James Edward Fox
Tim Koomsorn
Dennis Francis McDonald
Saleh Ahmed Nasser
Clifford R. Seppanen
David Eugene Swanson

Soil Science

Terence Henry Cooper

DEGREE RECOMMENDED
JOINTLY WITH THE
COLLEGE OF ENGINEERING

Agricultural Engineering

Bassam Ahmed Snobar

CANDIDATES — FALL TERM, 1970

DEGREE OF
MASTER
OF SCIENCE

Agricultural Economics

Saeed Ahmad
Chain Singh Barla
Nancy J. Fong
Nguyen Minh Hai
Georg Hasenkamp
Thomas A. Hile
Joseph Sydney Johnson
Werner Kiene
Alberto Edmundo Martinez
Canute Augustus McLean
Robert Alexander Milligan
Muhammad Zillur Rahman

Animal Husbandry

David Beattie

Biochemistry

Sandra Elizabeth Granett

Building Construction

Stephen Paul Lietzke

Crop Science

JaeSun Lee

Dairy

Norman Cyril Rawlings

Fisheries and Wildlife

Edmund Jeffery Bieber
Barbara Lynne Gallup
Linda Laura Swartz
Frank John Tesar
James Robert Waybrant

Food Science

Charles Wellington
Groesbeck
Basil John Macris
Richard Marc Perlmutter
Joseph Edward Skwara
Hirotasu Toriumi

Forestry

Gerald William Andrews
Michael Hampton Legg
Louis Edward Wagner

Horticulture

Gary Allen Anderson
Cheryl Margo Harrington
Eugene Albert Mielke
Gregory Paul Pagano
Vernon Arie Wittenbach

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

DEGREE OF MASTER OF SCIENCE

Packaging

Robert Max Fiedler
Daniel Lee Goodwin
Kevyn Mark Irving
Chiasiang Sam Lai
Gary Edward Morrison

Park and Recreation Resources

Ronald Kaiser
Darsan Wang

Poultry Science

Edward Arnold Cogger

Resource Development

Gordon Robert Anderson
Ralph Edward Christensen
Rodney Hans Despain
Douglas N. McEwen
Waldon Theodore Miller
Denis Cornelius Nelson
David Dennis Olson
Jan Herman Raad
Earl Phillip Updike

Soil Science

Dennis Byron Fenn

DEGREE RECOMMENDED
JOINTLY WITH THE
COLLEGE OF ENGINEERING

Agricultural Engineering

Timothy Wendell Evans
Othman Mohammad Judah
Ismael Obwoya Uma

Agricultural Business
Raymond Gerald Blake
Kenneth Ignatius
Koenigsknecht
Donald Otto Obrigkeit
H**Gene Alan Veliquette

Agricultural Economics

Gary Michael Gettel
Walter Jared Sperry
Earl Robert Wissman

Agricultural Mechanization

*Michael Francis Armstrong

Animal Husbandry

Penelope Kaye Freeman
Bruce Irving Holmes
Lonnie Lee Hopson
*Ralph Jarold Lipsey
Philip Edward Schmiede
*Lawrence Erving Stevens

Building Construction

Frank Thomas Howland
George Kimberly Kelch
Richard Allen Martin
Richard Alan Surato
Dennis Arthur Turbin

Dairy

Lyle Lester Eavy
Jay Charles Lemmermen
Brent Carleton Wilson

Fisheries and Wildlife

Phillip L. Casterton
David Alan Dobbs
Leon Lewis Fewlass
Janet Hentschel
*Thomas Vern Kreh
William Howard Lack

Michael John O'Sullivan
Frederick Louis Pauly
Richard Allan Shellenbarger

Food Science

Cathy Ann Schafer

Forestry

*Melvin Jay Baughman
*Charles Martin Bright
Gary Norman Leinonen
Michael Robert Renwick
Larry J. Tessin

Horticulture Marketing

Walter Nicholas Karony, Jr.
William Ritchie Smith

Horticulture Science

Edward Ross Grant
Catherine Huff Hasselback
Daniel Karl Sell
Dennis William Strauss

Lumber and Building

Materials Marketing

*Michael Edward Kessler

Packaging

Sanford Preston Ames
Robert Eric Anderson
Raymond Arthur Balbach
Thomas Michael Ball
James Allyn Bennett
Jeffrey Bien Block
Thomas James Brodie
Daniel Kent Bruce
Richard William Childress
Robert Bruce Crowe
Michael Owen Duvall
Charles Lee Frasier
David Crittenden Garland

Jay Norris Harker
John Michael Heuchert
William Floyd Hill
Robert Scott Jones, Jr.
William Clark Kropf
Joseph Paul Mocer
Thomas Peter Mrozek
John Arthur Murphy
*Keith Thaddeus Obal
Daniel Lee Osbeck
Charles Warner Peterson
John Goss Ratcliff
James William Resac
Melvin Carl Schlicker
Ronald William Shinkle
Dennis Lee Smith
Richard Sokloski
Roger William Thomas
Michael Dennis Walsh
Marilee Dawn Witt

Park and

Recreation Resources

Douglas Lee Cronkhite
James Michael Hooker
William Martin Kosmider
James Kenneth Magyar

Resource Development

*Susan Helen Maki

DEGREE RECOMMENDED
JOINTLY WITH THE
COLLEGE OF EDUCATION

Agricultural Education

*Douglas Ray Davidson
*Craig Allen Edgerly
William K. Farmer
Ricky R. Rockwell

Fisheries and Wildlife

Fred Dalton Herring

H Honors College
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** With High Honor

COLLEGE OF ENGINEERING

LAWRENCE W. VON TERSCH, DEAN

GRADUATED SUMMER TERM 1970

DEGREE OF
MASTER
OF SCIENCE

Civil Engineering

Hyo Nam Cho
Khojasteh Farhang-Ardakani
Luiz Flávio Autran
Monteiro Gomes
Rodney W. Lentz

Computer Science Chun-Teh Wu

Electrical Engineering

Bruce Edward McComb
Alexander Brisbane Murphy

Mechanical Engineering

Anwar Rahman Daudi
Arthur Thomas Morton, Jr.

Metallurgy

Richard Edward Schafer

Systems Science

David Harold Curtice
Forrest John Gibson
Leena Lian

CANDIDATES — FALL TERM, 1970

DEGREE OF
MASTER
OF SCIENCE

Chemical Engineering

Vinod Krishna Das
Dhirajlal Morarji Gosar
Ted Alan Kleinhenz
Mahendra J. Shah
Sureshchandra M. Sheth
Jagadeswara Rao Tipirneni

Civil Engineering

Abdola Lari Rastegar
Hakimuddin Shakir
Hossein Dormiani Tabatabac

Electrical Engineering

Falk Mehmet Arsever
Mirza Siddio Beg
Angelo Dimitriou
Shahrooz Fath-Azam
Carl Edward Grove
Donald Edward Livesay
Warren E. Snogren, Jr.

Mechanical Engineering

Suresh Ranganath Dabade
Deepak Gurunath Kanaglekar

Mechanics

Donald G. Baird
Joseph Francis Binkowski

Systems Science

Juris Arturs Ukstins

DEGREE OF
BACHELOR
OF SCIENCE

Chemical Engineering

Fletcher E. Allen
James Eugene Cole
Arthur Albert Rasher
Harold Robert Weinhaus

Civil Engineering

*Lawrence Joseph Doyle
Dwight Allen Hornbeck
Victor James Pilar
Jon Fordney Rice
Terry Louis Walkington

Computer Science

*James Richard Krause
David Leo Leutz
David John Pallas
Donald William Porter
Fred David Rosenberg

Electrical Engineering

*Dallas T. Cushman

Richard William Gensler
Mark Allan Jablonski
Duane Lawton
Andrew Joseph Paluch
Ronald Russell Pegg
Terrence P. Tarr
Larry Michael Tiedt

Mechanical Engineering

H* Thomas Bruce Burket
Charles Peter Darby
*Terrance Michael Dean
Richard James Dolan
Frank Gonzales, Jr.
Richard Arthur Hammond
Scott Boyce Hicks
Theodore Robinson
Hodges, III
Fred Carl Kresky
John Allan Kuchar
Leonard Edwin Marshall
Steven Preston Schaible
Ronald Theodore Utter

Mechanics

*A. Wayne Coursol

Metallurgy

Don Armand Rousse

Systems Science

Michael Allen Hogle
*Donald Wayne Johns
H* William A. Maas

DEGREE RECOMMENDED
JOINTLY WITH THE
COLLEGE OF AGRICULTURE
AND NATURAL RESOURCES

Agricultural Engineering

R. Kent Collins

H Honors College
* With Honor
** With High Honor

COLLEGE OF HUMAN ECOLOGY

JEANNETTE LEE, DEAN

GRADUATED SUMMER TERM 1970

DEGREE OF MASTER OF ARTS	<u>Child Development</u> Kristen Marie Anderson Joyce Diane Bischoff Shelley Joyce Bjorkman Dixie Lee Hesler Sandra Marie Jorgensen	<u>Family Studies</u> Gayl Anne Alexander Sister Christiana LeBlanc, S.S.J. Judith Allen Moore	<u>Home Management</u> Margaret Lorraine Bucklin M. Charline Hatchett <u>Textiles and Clothing</u> Charlene Duch Allen Shirley Jean Feuerstein
DEGREE OF MASTER OF SCIENCE	<u>Foods</u> Sandra Lynn Smith <u>General Home Economics</u> Monica Mary Kim Marian Milarch Zupin	<u>Home Economics Extension</u> Audrey June Emery <u>Institution Administration</u> Carl Edward Davis Sister Roseann M. Koskie	Nancy Ellen Raley, C.P.P.S. Donald Herbert Ralph <u>Nutrition</u> Constance Maxine Parks

CANDIDATES — FALL TERM, 1970

DEGREE OF MASTER OF ARTS	<u>Family Studies</u> Rajwant Kaur Grewal Dorothy Hibbs Riley Susan Ferne Simmons	<u>Home Economics Education</u> Erlinda Luz T. Demeterio Susan Elizabeth Parrish	<u>Textiles and Clothing</u> Patricia Jo Falardeau
DEGREE OF MASTER OF SCIENCE	<u>Institution Administration</u> Shirley Beverly Markel Ann Marie Messersmith	Sister Bernadette Mary Novack	<u>Nutrition</u> Angela Kung-Abei Young

COLLEGE OF HUMAN ECOLOGY

DEGREE OF BACHELOR OF SCIENCE

Community Services

*Tanya Darlene Bennett
Janet Louise Landry

Dietetics

Janine Adele Renfrew

General Home Economics

*Margaret Gail Anderson
*Helen Ruth Bartlett
Marie Josette Brinkman
Catherine Elizabeth
McNeilly
Kathleen Diane Rabbers
Sharon Anne Thompson
Melinda Anne Wallace

Home Economics with

Communication Arts

H**Kathryn Marianne Kolasa

Interior Design

Marilyn Cummins
Roberta Ann Davidson

John Allan Eby
Jayne Elizabeth Grohman
Linda Johanna Hinchey
Evelyn Joey Owens

Retailing of Textiles and Clothing

A. Pamela Argersinger
Patricia Ann Buckley
Mary Patricia Conkle
Lenna Diane Cummings
*Karen Rita Edquist
Carole Anne Hudenko
Donna Palango Lertola
Susan Diane Miechiels
H**Jannis Ann Mollenkopf
Betty Jane Pijut
Nancy Ellen Potter
Linda Catherine Studders
**Lynn Kay Wittenbach
Van Drie
Carol Ann Ziegler
Mary Louise Zimmerman

DEGREE RECOMMENDED
JOINTLY WITH THE
COLLEGE OF EDUCATION

Child Development and Teaching

H**Mary Lynn Allen
Joan M. Cunningham
Suzanne Claire Hanley
Marianne Wess
Frances Claire Wright

Home Economics Teaching

Cynthia Daroci
Cynthia R. Dibble
Jeannette Halladay
Mary M. Harp
Carolyn Sue Hines
Stasia Harriet Kambo
H**Karen Kay Kuechenmeister
Kathleen Mary Phelan
Patricia Ann Thiel
Mary Lynn Truemner
Linda Louise Wood

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COLLEGE OF VETERINARY MEDICINE

WILLIS W. ARMISTEAD, DEAN

GRADUATED SUMMER TERM 1970

DEGREE OF
MASTER
OF SCIENCE

Pathology

Kenneth Marshal Ayers
Ralph Lawrence Muhm

CANDIDATES — FALL TERM, 1970

DEGREE OF
DOCTOR OF
VETERINARY
MEDICINE

*Griffith George Acker
**Lance Edward Adams
*Robert Kenneth Anderson
*Paul Robert Bannow
William Rooney Bell
*Joel Jeffrey Beren
**Harry William Boothe, Jr.
*Robert Lee Boughner
*Peter Louis Brockman
Alan Phillip Davis
Russell James Dillon
John A. Eagling
Cynthia Eichman
Douglas Lynn Engers
Lester William Faremouth
Laurel Jeanne Ferris

Henry William Francisco
**Michael E. Hall
*William Russell Hare, Jr.
Noreen Virginia Harris
Drexel Kyle Hull
*Sharon Lee Jakubas
David Alan Komitor
Mark Watson Lanier
Terence Arnold Locke
**John Michael Losonsky
David Floyd Norton
*DuWayne Allen Penfold
*Patricia Ellen Price
*Thomas John Richter
Samuel V. Rowell

**Vincent Thomas Scialli
**Rhoda Ann Short
*Clair William Snook, Jr.
John J. Speelman
*James Edward Steffes
David Leslie Tinker
*James Benjamin Wallace
Kermit Orin Walter
James Lawrence Watkinson
Burton Gerald Wiersema
*James Walt Wilson
Nancy Elizabeth Wiswall
**Gail Sommers Wolfe
**Rosmary Ann Young
Willem Alexander Zwamborn

DEGREE OF
MASTER
OF SCIENCE

Anatomy

Robert Irvin Klingler

Large Animal Surgery and Medicine

Kenneth Edward Gertsen

Microbiology and Public Health

Boonchuay Dulyasukdi

Pathology

Jorge Antonio Villar
Frank Albert Voelker

Pharmacology

Joseph Edward LeBeau
Philip Friedrich
VonVoigtlander

DEGREE OF
BACHELOR
OF SCIENCE

Veterinary Medicine

James Karl Beebe
**Beverly Ann Gilroy

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COLLEGE OF BUSINESS

KULLERVO LOUHI, DEAN

GRADUATED SUMMER TERM 1970

DEGREE OF
MASTER
OF ARTS

Economics

Helmut Guenter Hauser
Mary Jo Watkowski

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

DEGREE OF
MASTER
OF BUSINESS
ADMINISTRATION

Yusef Rabah Abu-Khadra
Carl Marvin Adema
John Robert Akers
Thomas Robert Anderson
Jose Alfredo Aranda
Inal Cem Askun
Mehdi Azimi-Tabrizi
Stephen Michael Bachand
Bruce Alan Baldwin
Robert E. Barton
Richard Edward Besse
James Harold Beeson
Richard Michael Blake
Michael Alan Bohannon
Laurent Joseph Rene Brunet
Semih Bükür
Birol Bumin
Steven Burchik
Guillermo Santiago Burga
Eugene Ralph Burgess, Jr.
Richard Parker Butler
Jose Calderoni-Arroyo
Sara Jean Clemen
Michael Peter Croll
Donald DeWain Cross
Peter Cliffe Dahlberg
James William Damitio
Gregory R. Dietz
John Robert Ebey
Hasan Guner Erdonmez
Michael James Feeney
John David Felt
Kenneth G. Firchow
Richard Stratton Geary
Robert Henry Gentenaar
Erich Gross
Lawrence Linton Grover
Rudolph Elmer Gulstrand, Jr.
Neil Leslie Harmon
David L. Haslanger
H. Garrett Hayward
Gary Edward Heapphy
Robert Begle Heaps
Gary Alan Henriksen
Robert Charles Hodgson
Richard Allen Hoefer
Terrance Thomas Hoeffler

Peter Charles Holman
Junying Huang
William Theodore Huebner
John Blaine Idema
Richard Allan Janz
Charles Timothy Jockwig
James Patrick Johnston
Tomas Bruce Johnstone
Thomas Joseph Juchniewicz
Henry Leonard Kaminski
Joseph Aloysius Karle, III
Martin Ronald Kenealy
Manoutchehr Kia
Thomas Lorin King, Jr.
Dan Gene Kipping
James Walton Knight
James Edward Kosinski
Matthew Arthur Krakower
Jacques Jean Lacour
Madan Raj Lalwani
David Edward Large
Jean-François Michel
Limentour
Mark William Livermore
Stephen Kent Lonning
Donald Martin Lorton
Howard M. Mager
Maynard L. Mann
Victor Antonio Marcos
Kenneth Eugene Martin
James Jefferson McCleary
Robert Joseph McDonald
John F. McLane, Jr.
George Gust Mellios
Patsy Joan Mellott
Michael Leslie Mers
Timothy David Meskill
Ann Helen Michaels
Dennis Jack Mooradian
John Terence Moore
Joseph Edward Morgan
Mark Charles Morse
Richard William Norlander
Denis Carl Ohren
Patricia Ann Orsay
Frederick Alden Otto

Steven Henry Parker
Robert Andrew Pasanen
Donald Lee Pattengill
James Blair Patterson
Richard E. Petrait
Douglas Norman Pfaff
Robert James Pliska
Philip Eugene Poukish
Ward Stephen Rehkopf
Leo Mark Renaghan
Vaughn Del Roller
Joseph Marcel Rougeau
Edward Channing Rouillard
Pedro Antonio De Los Santos
Horace Jay Savage
Richard James Seif
Richard Charles Shorkey
James Bullard Short
Lester C. Shu
Roy Jon Simon
Stephen Curtis Smith
George Samuel Steen, Jr.
Richard Howard Sterling
Earle H. Stevenson
Robert Marshall Stross, Jr.
Thomas Gerald Tarvis
Osman Telimen
Birol Tenekecioglu
James Jay Thompson
Stephen Lee Thompson
Willard Nelson Thompson
James Edward Turner
David Richard Vance
Paul E. Vlieg
Charles Erik von Reis
Hang Fung Wang
Dennis Vincent Ward, Jr.
Richard Davis Weaver
James Robert Weber
Peter Whistance-Smith
Clifford Wayne Wilson
Bradley Deane Wilson
David Arthur Winkelman
Joseph Bitner Wirthlin, Jr.
Douglas Robert Wright
Ibrahim Yazici

COLLEGE OF BUSINESS

CANDIDATES — FALL TERM, 1970

DEGREE OF MASTER OF ARTS

Economics

Jonathan Hervey Francis
Norberto Frigerio
Edmund Emerson Gray

Evan Jones
Charles Stanley Mason
Brigitte Helene Sellekaerts

Phisit Setthawong
Barbara Ruth Spannaus
Eric Frans Tollens

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

DEGREE OF MASTER OF BUSINESS ADMINISTRATION

Robert Hervey Aldrich
John Raymond Anderson
Ole Nelson Anderson
Jose Carlos E. Arena
Bintug Aytek
Lloyd S. Baird
John Eldon Ball
William Wallace Ballantyne
Douglas Allen Barclay
John Walter Bauchman
Zelma Josie Bennett
Philippe Michel Brasseur
Dennis Jack Brieske
David B. Brower
William J. Brown
Terry Allan Buller
Mehmet Kemal Burat
Hüseyin Kâmil Büyükmirza
Wesley Forrest Byloff
Parvaiz Akhtar Chaudry
Brent C. Clever
David Paul Colby
William Roland Cook
John H. Costello III
Thomas William Davidson
Sergio Roberto Dias
John Dixon Downes III
Wayne C. Eagleson
J. Timothy Edmunds
Cemal Ekin
Richard Danton Ensor
Myron Lloyd Erickson
Leonard Francis Fiore
Lance Alexander Fleming

Patrick Gregory Fox
Sergio Topacio Goquiolay
Stanley Edward Guski
Victor Guillermo Gutierrez
James Hugh Hartl
Werner Paul Hauer
Norman Rhodes Haynie
Thomas Marshall Hein
Zach Ervin Holmes
John Stephen Horner
Kevyn Mark Irving
John A. Jacobs
William Harlan Jakad
Miguel Tovar Jarero
Russell Kaminski
Kevin John Kelly
Michael Ralph Killian
Theodore Walter Kinkel
Robert Jackson Kleine
George Marion Kolasa
Robert Dan Lamoreaux
Ronald M. Larsen
Raymond Leahey
Janusz Tadeusz Leja
Michael James Littlefield
Michael Paul McConnell
Wataru Nagata
Oscar Cabahug Noble
Michael Edward O'Neill
Lutfu Oner
Thomas James Peckham
Edwin Stevens Perry
Gary Richard Peterson
Joseph John Phillips

Calvin James Pratt
Larry Wayne Reed
Gerard Anthony Reidy
Dale Vincent Reiner
Randall Earl Rennpage
Jay Calvin Ritchie
Timothy Edward Roddy
Lauro Rodrigues
Miguel Enrique Rojas
William Rowland Russell
John George Russo
Telmo Schoeler
William Joseph Scothorn
Mack William Seney
V. P. Shanmugham
Ural Sözen
Manfred Anton Staab
Roger Andrew Strang
James Alton Stroup
Chachavan Sukitjavanich
Luis Jose Tarazona-Cote
George Edwin Tilden
Richard Arthur Tjarksen
Michael Donald Tuttle
Marvin H. Uehara
Mehmet Selcuk Uslu
Jon J. Vander Zouwen
Kanchana Vearasilp
James Curtis Welch
Judd Craig Wellard
David DuWayne Wesslink
Keum Hak Whang
Ray Neville Wrisley
John E. Yoder

DEGREE OF BACHELOR OF ARTS

Accounting

*John Richard Bell
Vincent Joseph Cesarz
H**Wilma Jean Chapman
Bernard Thomas Dare
Karl Frederick Dreier
H**William Aaron Evans
William Sheldon
Gladstone, III
Robert Earl Hagedorn
Gary Norman Hooper
Michael John Hoy
Thomas Stephen Jaskolski
Philip Eldon Kline
John J. Lauffer

Robert Joseph Lindberg
David Frederick Loye
David Allen Pedersen
Glenn William Peters
William Weber Roberts
Thomas J. Sheridan
*Michele Marie Stickney

Economics

David E. Alkire
Richard Roy Benedict
*Melbourne Roy Boynton
Gerald Lee Cluley
*Sheryl Lynne Dahlke
Carl Chris Dendrinos

Peter Rochford Devine
Bettina Echt
Thomas P. Freismuth
James Michael Heukels
H**Roger Paul Klee
*James Otto Kopietz
Cheryl Diane Lalk
*John Anthony Myers
Ronald Mark Ossipove
Leslie C. Ravitz
H*John Patrick Spencer
Stuart Moulton Vaughan, Jr.
Michael Hugh Ward
George William Zimmerman

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COLLEGE OF BUSINESS

Financial Administration

J. Edward Day
Douglas Willard DeLeeuw
William George
Fredericks, II
Alvin Junior McChester
Donald Paul Pleva
H* Thomas George Welsh

General Business

Administration

Peter Michael Agnone, Jr.
Larry Duane Applegate
H. Michael Barbee
John Begtzos, Jr.
Ronald Bruce Borngesser
Jack Donald Brown, Jr.
Ronald Lynn Brownlow
James Kerry Burd
David Warren Caulkett
John Daniel Collins, III
Brian D. Converse
Peter Slade Damon
*Dennis Ronald Doyle
*William James Frantz
E. Bruce Gillespie
Robert Steven Graham
William Kirkland Greene, Jr.
Louis S. Haas
William Robert Hart
Robert Paul Hockman
Michael H. Honold
Marvin James Howle
Daniel M. Hubbard
James Joseph Jablonski
Patrick Allen Jacobs
Eric Lynn Johnson
Michael Richard Knoblock
Barry Michael Kudrick
John Hunter Lapelle
Carolyn Ann Larabell
Michael David Marks
Alexander Campbell Maul
D. Bruce McCormick
Henry Charles Miller
Charles Reginald Moore
William John Nunn
Patrick Joseph O'Keefe
James Bryce Orr
Larry Frank Reisner
Michael Louis Remondino
Terence Vincent Roberts
Robert John Rowling
Ronald Burck Sambaer
Jeffrey F. Savery
Thomas Allen Schildhammer
Dennis Wayne Schoenrock
Charles Jacob Seibert
Dean Linwood Spangler
Thomas John Tacket

Roger Bruce Tallman
Van Patrick Thornton
Gary Alan Walter
John William Wetzel
David William Zimmerman

Hotel, Motel, and
Club Management
Rodman Elder Harris

Hotel and Restaurant Management

James Nelson Adduci
Mark Fisher Blinder
Thomas Adair Correll
John Richard Farris
Smith Davis Hayward, Jr.
Terry Lee Heidtman
Michael Pope Higgins
Gary Jon Kaiser
Darel D. Lantz
Jeremy P. Lumianski
Carla Sue Marsik
Donald Ross Mendham
Lon Millstone Orenstein
John Baker Parker
Ernest James Scott
Gary A. Severn
John Edward Uhrick
James Neal Vogt
Michael Joseph Ziolkowski

Industrial Administration

Eugene Fred Backer
Richard William Heitman
Theodore Alfonse Jacques
Lloyd Angelo Kimbrell, Jr.
*Donald Eugene Loreman
David Charles Lyjynen
Kenneth Charles Merritt
David Roy Moore
Robert Allen Nelson
**James L. Sanford
Larry Curtis Van Riper

Marketing

Wellington R. Burt, II
Peter R. Chapman
Jonathan Ames Dempster
*Gary Robert Dodd
Calvin Jay Fox, Jr.
William David Frankish
Donald Grant Gardner
Robert Burns Guyot, III
Gerald Peter Holmes
Thomas R. Jennings
*Martin Paul Kravitz
Bruce Gregory Krieger
Jack Allen Leemgraven
*Theodore Dean Lasley

*William Earl Lockwood
Dean Edward Milligan
Robert Francis Moore
Linda Elaine Noble
Dennis Michael O'Connell
Jeff Scott Ramsey
Karen Lynn Shrubbs
James Christopher Stopa
Joseph Patrick Thompson, Jr.
Donald James Tomanica
Charles Arden Viane
James Fredrick Weaver
Craig William Weirich
Charles Robert Wilson
William E. Yoder

Office Administration

Leslie Sue Carman
Betty Ann Kronemeyer

Personnel Administration

Ronald R. Alderson
Duane James Bazzett
Francis Raymond Butler
Gary John Dayton
James Edward Flood
Jerry Eugene Fulbright
Terry Alan Gowan
Edward Warren Hollister
Terrence David Rivard
Henry Allen Sachs
William Allan Saffo

Transportation

Administration

Glenn Thomas Muncie

DEGREE RECOMMENDED
JOINTLY WITH THE
COLLEGE OF EDUCATION

Business Education

Barbara Ross Barnum
Joan Nancy Franczek
Marilyn Lorena Hinderer
Thaddeus L. Prokopowicz
Marianne Patricia Rehmann
Jane Lou Warner

Business and Distributive

Teacher Education

George Joseph Gembis
Douglas Clay Smith

Distributive Education

George Edward Jones, III

Economics

Gordon Jack Light

DEGREE OF
BACHELOR
OF ARTS

H Honors College
* With Honor
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COLLEGE OF EDUCATION

JOHN E. IVEY, JR., DEAN

GRADUATED SUMMER TERM 1970

Education

DEGREE OF
MASTER
OF ARTS

Mary Angela Abel
Dean Adams
Abraham Ralph Albenda
Donna Mae Ambs
Richard Thomas Arpin
Patsy Francis Arpino
Margo Susan Babb
Jonathan Paul Bacon
Robert Raymond Bailey
Pamela Jeanne Bakeman
Jack Rodney Baker
Sue Jo Bakita
Martin Henry Bakken
Virginia Borglin Barber
William Jerome Barnes
David J. Bartels
G. William Bartow
Jane Ophelia Bass
Mary Elaine Bassil
Phyllis Arlene Bayer
Gary Melvin Beebe
James Allen Bennett
Rosamary Bennett
Nancy Ann Benson
Norma Lou Berry
Sister Joseph Marie Biddle
Dorothy W. Bird
Sandra Leona Birdsall
Mary Ellen Bizzis
Thomas Richard Blackford
Joyce Marie Blackmore
Willie Ray Blair
Bert R. Bleke
Francis S. Blom
Christiana S. Blume
Linda Kay Bode
Marcia Ann Boehme
John Walter Bogue
Jacques Bouchard
Robert James Bouck
Walter Lylle Bowman
Jean Marie Boyian
John H. Braccio
John Winship Braidwood
Mary L. Brazee
Judith Ann Brien
Charlie Richard Brigham
Paul Allen Briner
John Andrew Brooks
Bonnie Marjory Brown
Virginia Van Pelt Brown
William Albert Browne
Robert Keith Bryant
Richard James Budden
Nancy Alma Burkle

William Farrell Burns
Dale Giles Bynum
Lloyd Enoch Campbell
John E. Carney
Janet Marie Carr
Donnard Castle
Bethel Grace Chadwick
Marilyn Ruth Cheney
James Douglas Christie
George Clarke
James Daniel Cochran
Elizabeth Kay Coggins
Sandra Beatrice Cohen
John Harris Collins
Stephen Paul Connolly
Ola Marie Cook
Suzanne Cook
Bonnie Lynn Corwin
Neil Robert Coté
Margaret J. Hornby Courtney
Martha Hill Covert
Carol Clement Cox
Shirley Arlene Crawford
Cunningham
Maria Angela Cuoco
Donna Marie Czubinski
Kathleen Ann D'Alessandro
Sumitra Dangsubutra
Karen Sue Danley
John Raymond Dantuma, Jr.
Chris Gordon Davenport
Robert Dwight Davidson
Mary Ann Davis
Ernest Frederick Dawson, Jr.
Patricia Ann Dearbaugh
Rosemary Anne DeHoog
Brian Beryl Delbridge
Bryan Edward DeLeo
Mary Rose Denney
Andrew Raymond Desetto
Marion Y. DeVinney
Marjorie Louise Dilley
John Wesley Donaldson
Thomas Anthony Doonan
Joanne Lynne Downer
Howard Wayne Drew
Condit Drury
Billie Anne Dugan
James Laurence Dunn
Karen Ann Dykstra
Sue Ann Edlin
Joseph Olugbemiro Efuntade
Mary Ann Egnatuk
John Virgil Ellis
Elvin L. Ellison
Thomas William Elsey
Kenneth Charles Erickson

Robert Carl Erickson
Daniel Edward Ernst
Robert Wayne Ervin
Micheline Falcitelli
Kathryn Ann Ferguson
Sandra Kipp Ferguson
Alice Gail Fidler
Madeline Frances Flaster
L. Kathreen Fleming
David Berl Foerch
David John Fogarty
Alice Gertrude Foster
Bonnie Lee Fox
Patsy Ann Fox
Katharine Elizabeth Frakes
Detlef Johann Frank
Judith Anne Frank
Ronald Sanford Freel
William Harold Freeman, Jr.
Christine Teresa Fugiel
Mary Angela Russo Fuller
Robert William Gagniuk
Dorothy Jean Key Gardner
Nancy Karen Gardner
Ellen Terry Gass
Phyllis Jean Gehl
Robert Arthur Genke
Herbert D. Gibbs, Jr.
Frances Laura Gibney
Garth Edward Gillet
Louise Hidecker Gilman
Doris Elaine Goad
Fred Joseph Goers
Waleed Kael Gosaynie
William Henry Greene
Lynne Robert Gregory
Anne C. Gross
David Lyle Grove
Mary Gettings Gruber
Gerald Charles Gruelke
Edgar E. Haase
Ann Marie Hackel
H. Marion Hake
Benjamin Edgar Hall
Linda Anne Hall
Zack Earl Hamlett
Thomas C. Hammond
Janet Lucille Harris
Hilda Marie Harvey
Barbara Rulffs Hass
Jeffrey Wayne Hatter
Wayne Lewis Haupt
Pamela Sue Hawkins
Sharon Lynn Hawley
Frances Austin Haynes
Ronald Lee Haynes
Robert Wayne Heacox

COLLEGE OF EDUCATION

Education (Continued)

DEGREE OF MASTER OF ARTS

John C. Healy
Mark Albert Hector
Iva Jeanne Hendershott
Marilyn Pearl Hennon
Wayne Bernard Herman
Sandra Neely Herndon
Edward Robert Herzberg
James Kenneth Hill
Richard Dale Hillaker
Margaret Grace Hillier
Mary Katherine Hilton
Philip Wayne Hollar
Dolores Anne Hood
Mary Joanne Howard
George Allan Hubka
Jeffrey William Hudson
John Sidney Huhn
Steven Tye Hurtt
Susan Ruth Ironside
Randall Mark Isaacson
Richard A. Jackson
Barbara Jean Johnson
Jean Carol Johnson
Earl F. Jones
Pauline A. Jones
Wallace Alexander Juall
Carol Edith Kasworm
Arlene Mae Katerberg
John Philip Kaus
Anne Marie Kearney
William John Keller
Jerry J. Kelley
Hope Meredith Kenerson
Malinna Kengchon
Michael Earl Kinter
Robert Beth Klein
Jean Louise Knauff
Mabel Verda Knicely
George R. Koski
Sue Cass Koziol
Richard Harding Krager
Helen Collins Kramer
Sheila Joy Krauss
Victor Roger Krawczyk
Janet Ann Kreichelt
Nancy Carol Kresko
Sharon Sue Krantz
John Frederick Kroon
Marjorie Ann Kropf
Nguyen Thi Xuan Lan
Nancy Ann Landers
Shelby Smith Larsen
Stephen Victor Laske
Truong Thi Le Khanh
Victoria Rosemary Lepisto
Karen Lillian Linden
Thomas Randle Little
Robert Lee Lloyd
Mary-Margaret Lopushinsky
Jennie Lynn Loudermilk
Kirk Bryan Louis
Dennis Martin Loy
Barbara Jane Lyon
John Ernest Lyon
LeRoy A. Mabery
Betty Marie MacDonald
Linda Jean MacDonald
Michael James MacDonald
Lynn Anne MacIntosh

Jessie Mae Mack
Dorothy Olga Majors
Elinar Annetta Manley
Margaret Lucile Mantke
Ann Brutschy Martin
Louis Martin
James Burnham Martinek
Sandra Lee Mason
Robert Michael Matsko
Felix Joseph McCarron
John Terrence McCauley
Marcia Lee McCollum
Linda Belle McDonald
J. Donald McDougall
Earl Eugene McKee
Charles D. McKenzie
Carla Jane Evans
McLaughlin
James Paul Medeiros
Janet Lee Melville
Ronald Lewis Merillat
Frederick William Meyers
Susan Lyons Miller
Donald Robert Mitchell
Julia M. Mitchell
Patricia Anne Mitchell
Judith Anna Moline
John Monoma
Ruth M. Hoyt Montney
Prachoom Mookdee
Brenda Ann Morad
Louis J. Morgan
George Ventress Morris
Susan Carolyn Morris
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Edward Roy Munger
Callie Miller Murphy
Mary Catherine Murphy
James Russell Muskopf
David Merton Neese
Patricia CreeCree Neff
Andrea Salzwel Nelson
Bernard Edward Nelson
Mariann Carol Neuburger
Sharon Emily Nichols
Charles Kenneth Niles
Robert John Nyquist
Carl Thomas Nystrom
Thomas Joseph O'Brien
Carolyn Gertrude Olsen
Robert Clarence Olson
Cynthia Ann Omans
Pearlene H. O'Neal
Donna Jean O'Ryon
Samuel R. Osborn
Howard Jones Osborne
John Keith Ostien
Melton Douglas Owen
Lucille Gaffney Oxendine
Frederick Robert Pamentier
Monty Oliver Parker
Robert Wallace Passi
Merilee Griffin Pearson
Roger Lee Perkins
Barbara Jane Perles
John Joseph Peters
Betty Rae Petersen
Arthur Ward Peterson
Jo-Alyce Karen Peterson

Lee Ellen Phillips
Kanit Phoomchusri
Mary Margaret Pike
Resa Susan Plattner
Robert Manford Poland
Ruth Horn Pool
James Henry Poppink
Donald Lee Porter
Eddie Porter
Terry Lee Post
Charles Jack Potts
Charlene Anne Pryor
David Lee Quinn
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John Lloyd Rasmussen
Ann Butler Reed
Merton Dean Reed
Jean Ann Theresa Reilly
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Greta Ellen Rey
Kenneth Lee Rhoades
Ruth Lorraine Richardson
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George Randall Robbins
Alyce Yvonne Robey
Charles Martin Roettger
Ronald Kent Roettger
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Arthur William Ruddy
Edith Foulk Ryan
Lynn Saroni
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Gerald Leroy Schaffer
Charles Raymond Schindler
Freida Willis Schneeberger
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Pamela Ann Schuler
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Frederick Henry See
Karin Marie Sefcik
Richard Anton Sgarlotti
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Rosemary Skehan
Roger Lee Smant
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Gordon Clark Smith
Mary Ann Smothers
Mary Louise Sokoloski
Penelope Nicki Soter
George Royal Spencer
Jack Francis Spring
Nancy Ree Staal
Ellen Elizabeth Stauffer
John Allen Steele
LeRoy Dale Stegink
Elaine Stephens
Russell Jay Sterenberg
Robert Duane Stob

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Education (Continued)

DEGREE OF MASTER OF ARTS	Dorothy Hengst Stout Jerry Arnold Strawderman Penchan Supachit Larry Gordon Sutton Chareonpol Suvanachot Bruce Everett Tanner Phyllis JoElla Terrian Otho Pence Thompson Scott Raymond Thompson William Harry Thompson Jean Helen Tipton Jacqueline Lou Trancik Cora Ann Troy J. David Turner Suellen Eve Usiak Antonio S. Valbuena Paz Cornelia H. Van Dyk Warren Ray Van Tongeren Nancy Lee Mercaldo VanWagner John David VanWinkle	Lodis Yvonne Veal Gerald Michael VerHeek Dragica Dada Vurdelja Leonard Paul Waclawski Christopher Ross Wagner Harriet Hollies Walkowski James Donald Walters Thomas Jerry Wandrey John D. Ward Ronald Floyd Warren James Thom Weaver Clifford Paul Weber Robert Alexander Wegner Allen Weinberger Carl Leon Western Charles Edward White Dennis Valentine Whitehead Pauline Jean Wiese David Lynn Will Jean Anne Williams Maxine Eleanor Williams	Thomas C. Wilson James H. Wingerter Harriet Joan Witteveen Roger Lee Wood Gary Kenneth Woodhull Corinne Lockwood Worden Raymond Dean Wright, Jr. Karen Koshakow Wroblewski Caroline Atsuko Yang William J. Yff Frank Crider Young Patricia Williams Youstra Joseph John Zaborowski Sharon Ann Zaleski Carol Jean Zaremba James Allen Zeedyk RuthAnn Tennant Zeigler Richard Benjamin Ziglar Connie Ann Zimmer Bennie Zukowski, Jr.

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Education

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Education (Continued)

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OF ARTS

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Lucy Anne Stucky
Robert Nicholas Swart
Judith Ann Swoveland
Jane Garrett Szczesny
David Paul Thomas
Phyllis Ann Thompson
Dennis Timothy Torp
Daniel Olin Torrey

Alvin Louis Turner
Clair Ernest VanZandt
Alice Varghese
Dale N. Viles
Keith Erwin Wallace
Nancy Lynne Symes Walters
Jacqueline Woolfolk White
Frederick Arthur Whitman

J. C. Williams
Lorraine M. Wilson
Ellen Marie Winslow
Ann Westbrook Winston
J. C. Womack
Mary Jane Worden
Norval G. Young, Jr.
Maurice Frank Zeleny

Elementary Education

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Robert Reuss Aikman
Gretchen Marie Anderson
Rosalind Archie
** Agnes Louise Arner
Patricia Elaine Baird
Karla Sue Barber
Jewel Linn Beaver
H** Julie Engelsma Booher
Karen Bakius Bosch
Christine Duckett Brown
* Ruth Adele Haukkala Brunke
Linda Rose Burnham
Sandra Burnham
* Deann Sue Campbell
Sheila Warren Corkrey
Ruthann Coston
Gina Marie Crandell
E. Ellen Crick
Sherry Lee Csucsai
Judith Ann Cudworth
Ann Skeen Cunningham
Gregory Vincent DeMatio
* Suzanne Brown Derry
Susan B Douma
* Lorene Marie Drew
* Marilyn Lois Elliott
Jean E. Epley
Marjorie Cay Fridson
Kristine Joran Froener
Carol Marie Grabemeyer
** Joan Ann Laura Greenhoe
Mark Edward Greenstone

Linda Ann Griffin
Deanna Kay Hall
Kathleen A. Harrigan
John Jay Harris
Clyde Wayne Hastings
* Kathleen Anne Hathaway
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Beverly Berglund Hill
* Marilyn Joanne Holmes
Pamela Kaye Hunt
H** Carol Suzette Johnson
Deborah Elaine Johnson
Frances Lorraine Jones
Larry Lynn Judson
Colleen Kelly
Susan Carol Kemler
D'Anne Marie Kleinsmith
Gail McLeod Krawford
Catherine Ann Krebs
Daryl Van Larsen
Patricia Diana Liebold
Gudrun Mary Lindert
Beth Irene Lipinski
Frederick Harland Lowe
Joanne Ruby Lucas
* Sandra Jeannine Luce
Jerold Wayne Lundgren
Barbara Jean Lusky
Betty Jean Martin
Mary Ellen Matigian
Jean Ann Meinecke
* Kay EVELDA Monica
* Clara Anne Morris
Sharon R. Nettleton

Kathleen Sue Nyhuis
** Rhoda Jean Olien
* Linda Kathryn Olk
Linda Sue Panter
Claudia Ann Raber
Peggy Ann Ramsey
Deborah O. Reese
Karen Sue Rose
Susan Bowerman Roth
Adele Sue Rowder
Joanne Dorris Schaffer
Becky Sue Schneider
Ronald Stewart Scott
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Sally Ann Shepherd
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Joan Marie Skolnik
Nancy Ann Sparks
Ingrid Ann Stenback
Florence Miller Stoddard
Terry David Thompson
* Beverly Leas Timberlin
Christine Marie Umbarger
Mozell Perkins Veal
Linda Jane Viswat
Jerry Lee Weismiller
Chloette Leigh Wenzel
Catherine Wilson Williams
Laura Lou Wilson
Sharon Ann Wilson
* Marcia Karen Wohlfeil
Beverly Jean Young
Judy Marie Zanarini

Health, Physical Education and Recreation

DEGREE OF
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OF SCIENCE

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Patricia Ann Bundshuh
William Paris Busch
George Raymond Chatlos
Fredrick Ernest Convertini
Judith Lynn Dawson
Richard Patrick John Duffett
William Raymond Enrico
** Connie Lou Fox
Christine Lynn Glonek
* Patricia Ann Hofmann
James Graham Jones
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Chester Lyle Knox
Thomas Alan Kutschinski
John Lewis, Jr.
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Carol Ann Cascais
Lynda Faye Cotter
Daun Christine Dickie
Kathleen Marie Donahue
Nancy Jill Epstein
Mary Agnes Garrity
Lisa Nell Holstead
Connye Yvette Lilly

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Cynthia Anne McQueen
Ela Singh
Kenneth G. Smith
Jane Eileen Wittkopp
Michael Edward Zenz

Communication

Robert Toombs Dixon, Jr.
Richard Reynold Goerz
Alfred Everett Wilson

Journalism

Elizabeth Ann Lewis

Television and Radio

Charles Garo Ashjian

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Thomas U. Foster
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Adonna Frances Lowe
Marilyn Joyce McCarthy
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Herbert Ralph Smith
Carl Douglas Windsor

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Elizabeth Rose Orlik

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Chitra
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Saundra Elaine Crispin
Michael David Peretz
Richard Alan McMaster Scott

Journalism

René Emile Pelissier
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Jerrold David Beckman
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Laurence Martin Gill
Charles Warren Larsen
Allan David Larson
David Rich Sleeper
Craig R. Stilwell
Deborah Ruth Wilkes

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Harvey Gunard Beach
Michael David Champagne
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*Peter David Murdoch
Stephen John Newman
Michael John O'Connor
*Sheila Marie Pauly
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Martin David Sekrenes
John Rocklin Shaw, Jr.
*Richard Norman Stein
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Brian Arthur Walker
Beverly Jeanne White

Audiology and

Speech Sciences

Paula Lenroot Christensen
Shirley Ann Williams

Communication

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John Edward Callender
Cathleen Ann Casey
Loren Duane Dunham
William Holding Echols
Thomas James Hartman
Gregory Stuckey
H**Douglas Edward Tyler, Esq.
*Sarah VanAntwerp

Journalism

Susan Germaine Bachman
*Kathleen L. Burke
Michael Terry Cody
John Elliott Gilbert
Hope Bunting Major
H**Carol Corriere Nelson
H**Linda B. Owen
Cheryl Ann Parker
Ray James Smith
John David Trafelet
Thomas William VanHowe

Television and Radio

Robert Sean Beehan
Michael Lee Benner
Ann Marie Blaine
Marsha Ann Boozer
David James Brown
*Nerassia Chism
Riste D. Cisler
Diane Faye Croisant
Peter William Croisant
Steven Robert Denton
Jerry Duane Dunklee
Judith Marian Geib
Philip George Haka
*Merle Willis Heath
Roger David Jozel
Eugene Michael Klemens
Ralph Eric Kyro

Charles Dennis Lindsley
Larry Thomas McLennan
Edward Patrick McNally
Mark Thomas Palmer
*Kenneth H. Parr
Frank John Pluta
Richard Lee Sanford
Randall George Sirko
James G. Squibb, Jr.
Lawrence William Trinkaus
Martin Douglas VanSickel
Frederick Radford Wenzel

Theatre

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*Cherry G. Hamrick
Holly Holdman
Mary Marguerite Mathews
**Anita L. Ratner

DEGREE RECOMMENDED
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Audiology and Speech Sciences

*Nancy K. Gosline
*Susan Eileen Nathan
Jane Anne Willmeng

Communication

Christine Reinert Goedert
George Arthur Goodchild
Phillip Floyd Grant
Barbara J. McCurdy
Harold Roger Rice
Brenda L. Webster
Annette Paulette Wisne

Theatre

Robin M. Fraser
*F. Georgann Wing

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COLLEGE OF ARTS AND LETTERS

RICHARD E. SULLIVAN, DEAN

GRADUATED SUMMER TERM 1970

DEGREE OF MASTER OF ARTS

Art Education

Rebecca Gracada Beeson
Susan Beth Kadetsky
Peggy J. King
Marlene Carol Potvin

Art History

Sarah Jo Davis
Ellen Augustus Dietrich

Art Practice

Diane Marie Laitala
Maryanne Helen Wier

English

Jane M. Adams
Sue Ann Brooks
Susan Helen Case
Carol Ann Costello
Cynthia Courts
Michaelene Rzepecki Farrell
Evelyn M. Fieseler
Edward John Hara
Nancy Rathjen Hayles

Maureen Elizabeth Honey

Ellen Louise Jarvis
Angela Marie Leonard
Donald Arthur Maxwell, Jr.
Joanna Louise McMaster
Gary Bruce Roelofs
Richard Dennis Walters

English-Secondary

School Teaching
Myrna Lynn Asch
Nancy Louise Buffenbarger
Collen Elizabeth Koziolk
Janice L. Sargent
Kay Ellen Simons

French

Sonia Gill Figler
Ronald Richard LeBlanc
Maria Alexandra Sayers

German

Edith G. Bonawitz
Audrone Marija Virskus

History

Dennis William Baird
Margery Nell Beal
Joseph William Bendersky
Mildred Patterson Brown
John Kesley Diberio
Edward John Gaffney, Jr.
Russell Mark Horton
Michael Vincent Namorato
William Frank Neumann
Richard Earl Nye
John Joseph O'Neil
Duane James Ross
Michael Lynn Sloomaker

Linguistics

Timothy Gerald Williams

Spanish

Juan Jose Gonzalez
Eulalia Dolores Goytizolo

DEGREE OF MASTER OF FINE ARTS

Art Practice

Jean S. Borofsky

Susan Jo Graeber

William Robert Johansen

DEGREE OF MASTER OF MUSIC

Applied Music

David F. Holwerda
Paula Jean Huber
David Charles Klinger
Ellen Elizabeth Mosher

Music Education

Richard Winston Blackford

Catherine D. Chernick
James Edward Curnow
Harold Dunbar House
Sister Esther Marie Humbert
Raymond Joseph Lacina
Elizabeth Anne Longo
Michael Shayne Miller
Sister Mary Alice Naour

Ronald James Perrote
Lawrence Bruce Reynnells
Ronald Phillip Saska
Timothy Dean Schrader
Charles Douglas Seybold
Thomas Ernest Tucker
Barry James Wentz
Mary Krueger Wentz

COLLEGE OF ARTS AND LETTERS

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DEGREE OF MASTER OF ARTS

Art Education

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Anne Katherine Guldberg

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Adriane Joy Bishko
Kathryn Bishop Eckert
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Art Practice

Philip Norman Frank
Soon Hai Nam
June S. Onesti

English

Karen L. Barnard
Leonor Cozzolino
Kathleen K. Harkness
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Heide Kiene
Lolly Popp

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Louise Jones Jensen

Philosophy

Judith Arlene Andre
Dennis Allen Bird
Susan Cope Ekstrom
Joe Keith Slaughter
Roger Marcel Starr
Donald William Werner

Spanish

Celestino M. Suarez Perez

DEGREE OF MASTER OF MUSIC

Music Composition

Fredrick Jon Wilcome

Music Education

Paulette Suzanne Butler
Janice Lynn Darling

Patricia Ann Johnson
Roberta Fenwick Leahey

DEGREE OF BACHELOR OF ARTS

American Studies

Randolph Earl Rogers

Art History

Merietta Theresa Oreste
Carolyn M. Shanks

Art Practice

Cortland Richard Dusseau
*William Lankford Graham,
Jr.
Kathleen Anne Hart
Raymond James Howard
David Walter Laetz
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Janet Louise Pashby
Gregory Tyler Smith
Allen James Woelzlein

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Marcia Diane Cook
H** Catherine Irene Devoe
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James Vincent Gibney
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Shellie Ann Petroff

German

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Forest Vernell Anderson
Michael E. M. Charles
Carmen Linda Contreras
Steven Wayne Crosby
Patricia Eileen Gritta
James Warren Kelch
Judith Ann Kirton
William Jacob Sonn
John Edward Stolberg

Humanities

H** Helen Sue Brandt
Lee Rigg Penwell
Zofia Wiltoria Sylwanowicz
§ Howard Lee Tonkin
** Jane Charlotte Warner

Humanities Pre-Law

Thomas Edward Anderson

Philosophy

Michael Robert Calcaterra
** Alan James McBeth

Spanish

Maria Elena Bogakos
Theresa Kilpatrick Gilbert

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Art Practice

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** Joy Deborah Meighen
* Ruth Ellen Sheldon
Kathryn Ann Slaghuis
Elaine Ann Wilson
Tina Leah Wolfe

English

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COLLEGE OF ARTS AND LETTERS

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Cynthia Ruth Levandoski
Kathleen Patricia Murphy
Nancy Lou Roberts
Beverly Kaye Rohde
Sharon Arlene Ross
*Sharon Leona Shay
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Linda Rose Stafford

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Daniel Francis Wozniak, Jr.

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Lynn Louise Risky

German
Darel D. Reed

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Merry Johannah McPherson
Linda Kay Miller
Linda Liinangi North
Catherine Mary Passamani
David Ernest Stein

Spanish
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Art Practice
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William Michael Casnovsky
*Priscilla Ann Dowler
Jane Ellen Grover
Nancy Suzanne Raisanen
Nicholas Clare Rhynard

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Georgia Carol Forster
*Betty Riley Padgett

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Music Therapy
Carole Ann Bryant
Judith Ann Rohr

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Dougherty, Jr.

School Music
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**Mary Louise Black
**Albert Kenneth Johnston
Richard Charles Sang
Wyhomme Joshua Sellers

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Biological Sciences
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Warren Neil Hannig
Vivian H. Redmond

General Science
James Joseph Cornelio

Denton Kornburger
Curtis Andrew McKenrick
Michael Eugene Quigley
Harry Eugene Rairigh
Donald Lee Richmond

Mathematics
John Addink

James Victor Brandt
James E. Dobias
Lynda Joy Jakolat
Donald Eric Lovejoy
Donna May Quidort

Physics
Larry Lee Jones

DEGREE OF
MASTER
OF SCIENCE

Biological Sciences
Sister Maureen Elizabeth Fox
Earl Duane Hatinger
Marcia Louise Leek
Peter John Ligor
Mark Alden Mabry
Henry David Nichamin
Harry F. Oyer
Therese Ann Porcella
Marianne Jacqueline
Schabacker
Deborah Susan Seltz
Frances Ware Smith
Sister Bernadette Catherine
Tourtual

Botany
Chiang Shan Tai

Chemistry
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Helen Marie Klimisch

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Dang Trung Phuoc

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David James Krause
Howard Lynn Richter

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Bruce Glastad
Larry Michael Hopkins
Chukwuemeka Onwubu
John Vincent Sweeney
Sandra Jeanne Ugel
Daniel Van Haften

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Katherine Marie Morris
Nina C. Runfola

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Horst Fritz Brauner
Robert Reid Doering
Robert Gormley
Joseph Jao-Tseu Ho
Lynne Howard Holley
Joseph R. Pernicone
George Z. Sionakides

Physiology
Dennis Arnold Baeyens

Zoology
Jane Louise Becker
Zon-Ring Jenny Chang
Norman Ira Platnick
Carol Ann Simon

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OF ARTS

Mathematics
Douglas Paul Hattrem

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Luis Beltrán Mata Guevara

General Science
Charles Henry Lowery
Dale John Rosene

DEGREE OF MASTER OF SCIENCE

Biological Sciences
Richard Earl Fitzner
Jacqueline Perkins Meyers
Malin Muangchinda
Frank C. Reed

Biophysics
William Lee Weller, Jr.

Botany
Sumalee Pichyangkura
Edward Martin Scharrer
Richard E. Stuckey
Kathleen Anne Wilson

Chemistry
Esther Yu-Hsuan Chao
Warde Thomas Collins

Entomology
David Henry Krause
Dang Trung Phuoc

Geology
Jeffrey John Daniels
Milton A. Gere, Jr.
Innaiah Pothacamury

Mathematics
Nancy Ann Cole
Kenneth Raymond Fruit
Yee Yee Tung

Microbiology
Doris Jean Beck
Donna Young Muirhead
William Lawrence Muth
Sheri Eckerling Simon

Virginia Leslie Walters

Physics
Robert Scott Averback
George Edmond Bohannon
Larry Lambert Burton
John Ryland Ricks

Physiology
Douglas Bruce McKeag
David L. Norton
Kenneth R. Olson

Statistics
Conrad Peter Mueller

Zoology
Charles David Drewes
Jon J. Kistoris

DEGREE OF BACHELOR OF ARTS

Mathematics
*Harold Colonna Watkins

DEGREE RECOMMENDED
JOINTLY WITH THE
COLLEGE OF EDUCATION

Mathematics
Janet Lynn Haas
*John Edmund Radke

DEGREE OF BACHELOR OF SCIENCE

Biochemistry
H**Bruce David Ray
Jerry Scopel
H**Stephen Roger Sizemore
Charles C. Warner

Biological Sciences
Joel Steven Mann
David Joseph Milan
Gayl Lynn Miller
Larry John Nemeth
Michael John Pasichnyk
Roslyn Elizabeth Wofford

Entomology
Ralph James Gorton

Geology
James Louis Eichorst
Peter Charles Leidlein

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Lynn Raymond Trentham
Thomas Michael Warfle
Kay Frances Wheeler

Mathematics
Aloysius Michael Bierut
*Kevin Maurice Hollenbeck
James Thomas Maples
Priscilla Sandra Prophet
H**Robert J. Rietz
John E. Schneider
H**Beth Anne VandeMheen
Roger Carl Wolf

Nursing
Martha Lee Christensen
H**Ann Fenley Minnick
*Vera Jean Veldman
Susan Jo Weil
**Marjorie Todd Weisgerber

Physical Sciences
Lon Alan LeBlanc

Physics
Dennis E. Csondor
Robert Edward Lasocki
H*Ames Duane Ray
Norman Leo St. Pierre

Zoology
Gregory Charles Alflen
Ronald James Barrette
Erik Nelson Breden
Martin Raymond Cirulis
*Aurora Kathy Dunstan
Daniel Ross Farra
Robert George Goodwill
H**Jacqueline Kay Harrison

COLLEGE OF NATURAL SCIENCE

Zoology (Continued)

DEGREE OF
BACHELOR
OF SCIENCE

H** Martin James Francis Hrynicky
Douglas Allen Klee
William Chester Monschau
Alan Bruce Morrison
H** Helene Mary Nagy
Robert Wayne Nicklas
H** Dana Dee Panknin
David Nelson Pugh
James McNeily Roy, III
Yvonne Jenkins Sharpe
Christy Lynn Wuerfel

DEGREE RECOMMENDED
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Biological Sciences

* Scott N. Gardner
Gary William Gray
Raymond John Gustafson
Suzanne M. Kirk
* William Lennon McKeand
Karen F. Newton

Richard John Peters
Carol Joyce Scheppele
Kristine Rose Guske Stuart
Francis Wallace Zak

Earth Science

Catherine Ann Kitcho

General Science

Bruce Meier Sherbeck

Mathematics

Scott Alan Billman

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COLLEGE OF SOCIAL SCIENCE

CLARENCE L. WINDER, DEAN

GRADUATED SUMMER TERM 1970

DEGREE OF
MASTER
OF ARTS

Anthropology
Edward Oscar Henry
Ruth Caroline Kohl
David Jay Minderhout

Geography
John Anthony Bivins
Freda Lee Brown
Mary F. Cochrane
Tamara Jane Collins
James L. DeForest
Walter Cornelius Farrell, Jr.

Political Science
Martin Donald Levine

Willoughby George Sheane,
Jr.

Psychology
Francis Henry Barron, Jr.
Jack E. Dawson
Jane Rath Dickie
Alan Lee Evans
Jennifer Gray Fidura
Edwin Alan Hartman
Gregory T. Loftus
Elek John Ludvigh, III
Gary H. Mendelsohn
Ronald Lewis Michelini
Riffat Moazam

Jean Apperson Pope
Earl Donald Walker
Elizabeth Ann Walker

Social Science
Linda Elaine Easley

Sociology
Margaret Johnson Adams
Carlin Paige Holden
Margaret M. Plumridge
Michael Harris Schneiderman

DEGREE OF
MASTER
OF ARTS
FOR TEACHERS

Geography-Secondary
School Teaching
Michael Anthony Pirrone

Social Science-Secondary
School Teaching
Mary D. Buchko

DEGREE OF
MASTER OF
LABOR AND
INDUSTRIAL
RELATIONS

Gerard Frances Fiala
Benjamin Nkem Okwumabua
George E. Parker
Michelyn Eve Pasteur
Robert Thomas Pendleton
William Lucas Soultis
Raymond Joseph Zigmont

DEGREE OF
MASTER
OF SCIENCE

Criminal Justice
James Ronald Avery
Bakri Mohammed Noor Basha
Dan Graham
Jack Warren Gundrum

Walter Calvin Lunsford
Jimmy Ray Mason
Robert Griggsby May
Forrest Mayo Moss

Robert Williamson Pryor
Clarence Henry Arlan Romig
James L. Shaffer
Scott Marion Tippin

COLLEGE OF SOCIAL SCIENCE

DEGREE OF MASTER OF SOCIAL WORK

Sari B. Anderson
Sue Anne Billings
Peggy Mae White

DEGREE OF MASTER IN URBAN PLANNING

David Alan Casciotti
Renato Nocon Rivera
Walter William Wilkman, Jr.

CANDIDATES — FALL TERM, 1970

DEGREE OF MASTER OF ARTS

Anthropology
Evelyn H. Barchi
Arthur Wesley Helweg

Geography
Abdulaziz A. Al-Sheikh
John Stuart Crossman
Charles Ipcar
John Sebiyam Nabila
Noritaka Nakamura

Political Science
Carola La Rosa Luque
Jose Luis Luque de Lara
Rolf Marshall
James Francis McClure

Lawrence Peter Moore
Selcuk Ozgediz
Mark Steven Rhodes
Alfred Anthony Santosuosso

Psychology
Martha L. Aldenbrand
Terry Walter Allen
Karen Grover Duffy
Jerry Carl Eyer
Jack Vincent Ferrara
Allen Goodman
Sandra Elaine Graham
Daniel Choda Gutkin
Robert Norman Harris, Jr.
Frank Fred Holly
Javon Albert Jackson

Aaron Karnilow
Barry Marshall Lester
George Marshall Opsincs
Kay Alice Schlappé
Larry Dean Smyth
Susan Marie St. Pierre
Henry Allen Vieth
Alice Madeline Wolfe

Social Science
Marvin Dennis Studinger
James R. Thomas

Sociology
Peter Craig Bishop, S.J.
Malka V. Karpin
Beth Janet Shapiro

DEGREE OF MASTER OF LABOR AND INDUSTRIAL RELATIONS

Berihun Alemahu
Spotsel Lee Boyd, Jr.
Barton Parker Fairey
Dolores Lyons

Thomas Lloyd Mason
Richard Santos
Jack Lee Shook
James Bernard Spellicy

John Francis Sullivan
David Cantrell Wiitala
William Paschal Wilson

DEGREE OF MASTER OF SCIENCE

Criminal Justice
Martin Prosper Carso, Jr.
Lynnette Cartee
Stephen Michael Cerovsky
Kenneth Edward Christian
Raymond John Gutknecht
William Kieth Hanson

William George Hegarty
James Joseph Hennessy
Donald Matthew Holmes
Marson Harry Johnson
Zigmund Stanley Kryszak, Jr.
Alan Lee Lawson
Jo Ellen Mann
Merlyn Douglas Moore

David Michael Oberle
Kenneth Phillip Ott
Bruce Alan Sokolove
Frank Richard Tomascik
Daniel Bruce Trudell

Geography
Sherman Keith Hollander

COLLEGE OF SOCIAL SCIENCE

DEGREE OF MASTER OF SOCIAL WORK

Kenneth Paul Bosman
Sharon Ann Katt

DEGREE OF MASTER IN URBAN PLANNING

Clifford Albert Hudsick
Ronald F. Nino
David Cheng-Chi Shih

DEGREE OF BACHELOR OF ARTS

Anthropology

Edward William Hahn
*Pamela Jean Kepford
Barry Latoszewski
*Robert Michael Ross

Political Science

William Ray Bishop
William Price Bryson
James Michael Dorr
Robert Donald Houtman
Robert Holmes Jones
Thomas James Koob
Glenn Earl Marshall
Harry Bonnè Meersma
Thomas Robert Mickey
*Lon A. Miller
Susan L. Patnode
Robert Alan Patzer
Richard Henry Ridings
James Neal Schubert
William Robert Storey
Roderick James Swartz
James Dimitri Xenakis

Psychology

Paula Marlane Andrasi
Susan N. Beard
Alan Howard Bokor
Dennis Ivan Borinstein
Dale Alan Camillo
Wesley Alan Guset
Mark William Huntington
Timothy Lirving McDonough
Mary Margaret Quinn
*Carol Ann Risley
*Mary Werkowski Santerre
Kenneth Stanley Talaska
*Barbara Allen Zeh

Social Science

*William Michael Atchison
*JoAnn Stephanie Balassone
H* Cynthia Ann Bereznoff
George William Bondie, Jr.
Gary Warren Bredahl

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H John Edward Brey
Andrea Oldham Byloff
Royal H. Calley, Jr.
*Barbara Jean Carrick
Joseph Catanese
Rosalie Augusta Clavez
William Paul Courtright

*Jonathan Ariel Cross
*Anne S. Epstein
*Philip Neal Fulton
*Daniel Francis Gillis

Larry Paul Hammond
Jain Elizabeth Hayes
Thomas Earle Hoener

H* Renard James Kolasa
Gary Reid Lazar
Gloria P. Litos

H* Robert Edward Logeman
David Lamont Mattson
Janet Mary Matuscak
Ann L. McCaslin
Douglas Charles McNiven
Mark Edward Miller
Rodger Lee Montgomery

*Maureen Joyce Murtagh
Stephen Donald Reynolds
Arnold Stuart Schafer
Robert Joseph Sheiko
Michael David Sickels
John Michael Spigarelli
John S. Stopyra, Jr.
*Doyle LeRoy Tarwater
Harry Steven Terrill
Dana Watson Tousley
*Sara Sabina Ulrey
Ernest Cecil Wimberley

Social Work

Sally Aitch
Julie Ann Bacon
Craig Marshall Dean
Alaine Frances Depner
Carolyn Joann Edwards
Judy Lynn Essebagger
*Justo Daniel Fajardo
Ronnie Norbert Fox

Laurel Lee Granlund
Mary Lee Irrer
Barbara Ann Lyijynen
Donna Jean McRae
Martha Louise Pagacz
*Sharon Jean Racey
*Becky Lynn Roberts
Kathleen L. Shorkey
*Donald Jelte Trap

Sociology

Alfred Henry Baume, II
Earl Dwayne Collom, Jr.
Carolyn Jean Gustafson
Patricia Ann Jordon
*Leslie Earl Leff
Carol Elizabeth Lindsey
*Judith Paule Macdonald
H* June Cheralyn Manning
Thomas Robert Pattinson
Lamar Nathaniel
Richardson, Jr.

DEGREE RECOMMENDED
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Social Science

Gilbert Elliott Apps
Carol Jean Collister
Alexander Dimitrijevic
David Lynn Donaldson
Barbara Jean Dotson
Mary Irene Edens
Anne Teresa Gage
Jerry Van Grant
*James Lee Gromak
Michael McClelland Hunter
Robert Lyle Loerke
*Janet R. Mackey
Kay Lynne Madsen
Kathleen Lorain Martel
Jane Elizabeth O'Sullivan
Robert Bruce Seal
*Carole Lee Tennant
Fred William Youngman
Lawrence Edwin Zielinski

COLLEGE OF SOCIAL SCIENCE

DEGREE OF BACHELOR OF SCIENCE

Criminal Justice

Gail Patricia Brown
Curtis Gordon Caterer
*William Keith Denslow
Robert Bruce Ebersole
*Steven A. Egger
Harold Fredrick Eppley
Michael John Hodge
John Wesley Ingersoll
H Albert Gerald Isaac
Thomas George Johnson
Dale Victor Kaucher
Robert Vanest Kelly
Walter Frederick Kreitlow, II
Barbara Lantto
Donald M. Mapley
Carol Ann Martin
Gregory Dale McPherson
*Ruthann Miller
Brian La Roue Peters
Allen Brodow Presser
Ernest Scott Smith
H Ray Clare Valley
Susan Marie Vassar
*Dave G. Vequist III
Robert Trent Walsh
Raymond Lester Walters
**Joseph Gerald Weinberg
William Leonard Wells
Richard F. Wilsie

Geography

Peter Lee Anderson
*William Scott Hanneman
Les Owen Jorgensen
Louis Anthony Koziol
Terrence John Stoeff

Landscape Architecture

Thomas Howard Armstrong
Stephen Richard Cefalo
**Victor Richard Nelhiebel
John Daniel Ruesink

Psychology

Roy Alfred Bachman
Laura Jeanne Chrest
Robert Alan Cook
Marc Del Mariani
William Patrick Durkin
**Sharyn Arlene Erickson
*Lawrence Joseph Grayheck
Dale Garand Jamros
H**Sharon Elizabeth Kahn
Louis Alan Kaufman
**Norman Larry Kelley
Gail Christine Kraft
Carol Lynn Larsen
Ann Louise McLean

George Downall Mitchell, Jr.
Randall Arthur Root
Jay G. Schneider
Gregory Karl Shenaut
*David A. Shutes
Teresa Marie Smith
S. Lynne Taylor
Linda Ann Truant
Antoinette Louise
Tsacoumangos
Allan Gary Weiss
William Charles Willging
Steven Neil Young
George Juris Zumburs

Social Science

Paul Abbo
William Carpenter Acheson, Jr.
Craig Maxwell Adams
Ross Pierce Alander
Michael M. Anderson
James Henry Berry
Cecil Francis Boyle, Jr.
Phil B. Brittain
Norman S. Charles
Douglas Albert Downey
Ted Sheldon Freeland
James Michael Gibbons
Robert Brian Gilroy
Gregory Thomas Haley
Terry Lee Harper
Alec Lynn Harshey
Richard W. Henlotter
*Linda Diane Henney
Richard H. Huneke
Kenneth Claude Inman
*John Russell Jouppe
Frederick Jack Kemp
Thomas Lyle King
William Lawrence Kiser
Thomas Herman Kleene, Jr.
Mary Catherine Kramer
*James F. Lear
Stuart Lee Leslie
Robert Joseph Lopker
Terrance Frank Loznak
Michelle Bennet-Alder
Meaders
Peter B. Merker
Frederick Robert Mulhauser
Jeffrey Glenn Mull
Sue Ellen Naczycz
David Clyde Newland
*William Peter O'Hare
Peary Anthony Pearson
*Roger Warren Peters
John Peter Randolph
John Robert Riedl
George Lannon Ringstad III

Robert Earle Robinson
Ronald F. Romelhardt
Philip M. Rupp
George Edward Schindewolf
Robert Lee Sherburn
Bennett Charles Smith
Michael Sholem Surnow
Randy Lee Tahvonen
Frederick Francis
Timpner III
Barrett Carl Vance
*James Hedley van Ravensway
Mary Virginia Vincent
Dennis Deen Weddington
Ernest Allen Wenger
Charles Paul Werner
James Calvin Williams
John Richard Winn
John Daniel Wood
Frederick Dean Ziegel

Sociology

Stephen Ellery Corey
John Farrington Dean
*Christine Marie Dunning
Suzanne Marie Genix
Anne Marie Greenwood
Kent Douglas Harder
Kenneth Charles Marlow
Gregory Gene Peron

Urban Planning

Charles Frederick Pscholka
Anthony Louis Tominac

DEGREE RECOMMENDED
JOINTLY WITH THE
COLLEGE OF EDUCATION

Social Science

Robert Greig Anderson
Richard Lynn Basso
Linda Kay BeDell
Thomas Arthur Borin
Frank Ernest Conklin
James Allen Dickinson
James J. Hilgendorf
*Raymond Paul Howe
Jane Lesley Johnston
Georganne Lark
David Thomas Lowrey
Mary Theresa McIntyre
LaVern Keith Nygren
William Frank Rolinski
Albert John Schertzing
*Larry Douglas Smith
Rex B. Smith
Michael James Tanguay

H Honors College
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** With High Honor

JUSTIN MORRILL COLLEGE

D. GORDON ROHMAN, DEAN

CANDIDATES — FALL TERM, 1970

DEGREE OF
BACHELOR
OF ARTS

H**Merryl Jeanne Estes
Peter Grant Gillis
Dianne Lynne Green
Susan Ruth Ingerson
Sally Virginia Kane
H**Dorothy Jean Kent
Anita Claire Rich

*Barbara Rosenbaum
*Susan Marie Schilling
*Carolyn Ann Smith
*Karen Lee Sullivan
*Carole Ann Turner
*Gregory Allan Turner
*Carolyn Sue Wilson

DEGREE RECOMMENDED
JOINTLY WITH THE
COLLEGE OF EDUCATION

*Donna Marie Allington
Kathleen Marie Varty

H Honors College
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COLLEGE OF HUMAN MEDICINE

ANDREW D. HUNT, JR., DEAN

GRADUATED SUMMER TERM 1970

DEGREE OF
MASTER
OF SCIENCE

Anatomy
Diane Carol Jordan

Pharmacology
Henry Michael Bowman

CANDIDATES — FALL TERM, 1970

DEGREE OF
BACHELOR
OF SCIENCE

Medical Technology
H** Martha Christine Garrels
James Dean Sigler

H Honors College
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JAMES MADISON COLLEGE

HERBERT GARFINKEL, DEAN

CANDIDATES — FALL TERM, 1970

DEGREE OF
BACHELOR
OF ARTS

*Meredith Lynn Alexander
Martha Rachel Cohen
Rebecca Jo Grime

Diane Lee Horn
*Peter Christian Mason

**Trudy U. Meltzer
H**Teresa Ann Sullivan

H Honors College
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RESERVE OFFICERS TRAINING CORPS

CANDIDATES — FALL TERM, 1970

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

Kenneth C. Inman
Louis A. Kaufman

*James R. Krause
Bruce G. Krieger

Lon A. LeBlanc
George D. Mitchell, Jr.

MILITARY SCIENCE

Field Artillery
Stephen Richard Cefalo

Infantry
Ernest Scott Smith

Medical Service Corps
Edward Joseph Masters

Ordnance Corps
Thomas Allen Schildhammer

Signal Corps
Richard Lee Sanford

Transportation Corps
David Eugene Decker

* Distinguished Graduate