151st
COMMENCEMENT
EXERCISES

Friday
August 2, 1996

Joyce Center — Concourse
University of Notre Dame
Notre Dame, Indiana
Events of the Day

Friday, August 2, 1996

BACCALAUREATE MASS

8:30 a.m.  Degree Candidates and Faculty assemble for Academic Procession to the Basilica of the Sacred Heart: the second floor corridor of the Main Building

8:40 a.m.  Procession Begins. (Please note: If the weather is inclement, the procession will be canceled. Proceed directly to the Basilica.)

9:00 a.m.  Concelebrated Baccalaureate Mass: the Basilica of the Sacred Heart

Principal Celebrant and Homilist
Rev. Thomas E. Blantz, C.S.C.
Professor, Department of History
University of Notre Dame

Concelebrants
Priests who will be receiving degrees, priest members of the faculty, and priest members of the Congregation of the Holy Cross

COMMENCEMENT EXERCISES
CONFERRAL OF DEGREES

10:25 a.m.  Degree Candidates and Faculty assemble in the Auxiliary Gym of the Joyce Center

10:50 a.m.  Academic Procession begins

11:00 a.m.  Conferring of Degrees Ceremony in the Joyce Center Concourse

Presiding Officer
Nathan O. Hatch, Ph.D.
Provost of the University

Commencement Address
Phillip R. Sloan, Ph.D.
Professor, Program of Liberal Studies
University of Notre Dame

(Guests are requested to be seated in the Concourse of the Joyce Center by 10:50 a.m.)

Reception immediately following the ceremony for graduates and guests: Joyce Center - North Dome
151st
BACCALAUREATE
MASS

Friday, August 2, 1996
9 A.M. EST

Basilica of the Sacred Heart
University of Notre Dame
Notre Dame, Indiana

Principal Celebrant and Homilist
Rev. Thomas Blantz, C.S.C.

Organist
Andrew McShane

Cantor
Psalmist
Timothy Schorn '95 Ph.D. Boreta Singleton '96 M.A.
The Quintessence Brass
Opening Rites

ACADEMIC PROCESSION
Trumpet Voluntary .................................................. Stanley

OPENING HYMN
All People That on Earth Do Dwell  
tune: Old 100th

1. All people that on earth do dwell, Sing
2. Know that the Lord is God in deed; With
3. O enter then his gates with praise; Ap
4. For why? the Lord our God is good; His
5. To Father, Son, and Holy Ghost, The

to the Lord with cheerful voice; Him
out our aid he did us make; We
proach with joy his courts unto; Praise,
mercy is forever sure; His
God whom heaven and earth adore, From
serve with mirth, his praise forth tell, Come
are his folk, he does us feed, And
laud, and bless his Name always, For
truth at all times firmly stood, And
us and from the angel host Be

we before him, and rejoice.
for his sheep he does us take.
it is seemly so to do.
shall from age to age endure.
praise and glory ever more.
PENITENTIAL RITE

OPENING PRAYER

READING I
Acts 2, 1-11

RESPONSORIAL PSALM
Psalm 104

Send forth your Spirit, O Lord,
and renew the face of the earth.

READING II
I Corinthians 12, 3-7, 12-13

GOSPEL ACCLAMATION

Alleluia, alleluia, alleluia.

GOSPEL
John 20, 19-23

It is customary for men, although not for women wearing academic garb, to have their caps removed during the Gospel and Homily.

HOMILY
Rev. Thomas Blantz, C.S.C.

GENERAL INTERCESSIONS

Lord, hear our prayer.
Please be seated.

Pavane .............................................................................................................................................................. William Byrd
Fantasia .......................................................................................................................................................... William Boyce

Eucharistic Prayer

INTRODUCTORY DIALOGUE + PREFACE

It is customary for men, although not for women wearing academic garb, to have their caps removed during the Eucharistic Prayer. The caps may be replaced at the end of Communion.

SANCTUS

Holy, holy, holy Lord, God of power and might, heav’n and earth are full of your glory. Hosanna in the highest, hosanna in the highest. Blest is he who comes in the name of the Lord. Hosanna in the highest, hosanna in the highest.
MEMORIAL ACCLAMATION

Christ has died, Christ is risen, Christ will come again.

GREAT AMEN

Amen, amen, amen.

Communion Rite

LORD'S PRAYER + SIGN OF PEACE

BREAKING OF THE BREAD + AGNUS DEI

Cantor: Lamb of God, you take away the sins of the world, have mercy on us.

Cantor: Lamb of God...

All: You take away the sins of the world; grant us peace.

RECEPTION OF COMMUNION

Psalm 34

Taste and see the goodness of the Lord;

taste and see the goodness of the Lord.

PRAYER AFTER COMMUNION
Notre Dame, Our Mother

Notre Dame, our Mother tender, strong and true,
Proudly in the heavens gleams thy gold and blue.
Glory's mantle cloaks thee, golden is thy fame,
And our hearts forever praise thee Notre Dame,
And our hearts forever love thee Notre Dame.

Alleluia!

Sing To Jesus

Alleluia! Sing to Jesus! His the scepter, his the throne; Alleluia!
Earth our food, our stay! Alleluia!
Lord of lords we own; Alleluia!

His the triumph, His the victory alone;
Here the sinful Flee to you from day to day:
Born of Mary, Earth your footstool, heav'n your throne:

Hark! the songs of peaceful Zion on Thunder

In intercessor, friend of sinners, Earth's remains,
You, within the veil, have entered, Robed in

like a mighty flood; Jesus out of
doom, plead for me, Where the songs of
flesh, our great high priest; Here on earth both

every nation Has redeemed us by his blood.
all the sinless Sweep across the crystal sea.

Acknowledgements
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151st
COMMENCEMENT
EXERCISES

FRIDAY, AUGUST 2, 1996
11 A.M. est

JOYCE CENTER — CONCOURSE
UNIVERSITY OF NOTRE DAME
NOTRE DAME, INDIANA

The Graduate School
The Law School
The College of Arts and Letters
The College of Science
The College of Engineering
The Graduate and Undergraduate Divisions of the College of Business Administration
ORDER OF EXERCISES

Processional
by Harold L. Pace, Ph.D.
University Registrar

America, the Beautiful
*Bates-Ward
Ensemble and Audience

O beautiful for spacious skies,
For amber waves of grain
For purple mountain majesties
Above the fruited plain.
America! America!
God shed his grace on thee,
And crown thy good with brotherhood
From sea to shining sea.

Convening of the Convocation
by Nathan O. Hatch, Ph.D.
Provost of the University

Presentation of Candidates for Degrees
The Doctor of Philosophy degree
by James H. Powell, Ph.D.
Associate Dean of the Graduate School

The Legum Magister and the Juris Doctor degrees
by Patricia C. Leonard, J.D.
Assistant Dean of the Law School

The Master degree
by James H. Powell, Ph.D.
Associate Dean of the Graduate School

The Master of Science in Administration degree
by Edward R. Trubac, Ph.D.
Associate Dean of the College of Business Administration

The Bachelor degree in the College of Arts and Letters
by Harold W. Attridge, Ph.D.
Dean of the College of Arts and Letters

The Bachelor degree in the College of Science
by Francis J. Castellino, Ph.D.
Dean of the College of Science

The Bachelor degree in the College of Engineering
by John J. Uhran, Ph.D.
Associate Dean of the College of Engineering

The Bachelor degree in the College of Business Administration
by Edward R. Trubac, Ph.D.
Associate Dean of the College of Business Administration

Commencement Address*
by Phillip R. Sloan, Ph.D.
Professor, Program of Liberal Studies

Closing of the Convocation
The Provost of the University

Notre Dame, Our Mother* - (Alma Mater)
*O'Donnell-Casasanta
Ensemble and Audience

Notre Dame, Our Mother; tender,
strong and true
Proudly in the heavens gleams thy
gold and blue.
Glory's mantle cloaks thee, golden
is thy fame
And our hearts forever praise thee,
Notre Dame;
And our hearts forever love thee,
Notre Dame.

Recessional of the Platform Party

*It is customary for men, although not for women wearing academic garb, to have their caps removed during the
Commencement Address and the singing of the Alma Mater.
The Graduate School

THE DEGREE OF DOCTOR OF PHILOSOPHY ON:

Robert Thomas Archambeau, Chicago, Illinois
Major Subject: English
Dissertation: Wordsworth After Empire: Three Postcolonial Appropriations
Director: Prof. John E. Matthias

David Matthew Biewer, Findlay, Ohio
Major Subject: Mathematics
Dissertation: Blowup Rate of the Solution of a General Parabolic Equation with a Nonlinear Boundary Condition
Director: Dr. Bei Hu

Victor Francisco Calvo-Perez, Santiago, Chile
Major Subject: Chemistry
Dissertation: Assembly of Molecular Clusters of Clusters: Structure Versus Electronic Transitions
Director: Dr. Thomas P. Fehlner

James S. Campbell, Des Moines, Iowa
Major Subject: English
Dissertation: Other Wars: Ethics and Violence in Twentieth Century British and Irish War Poetry
Co-Directors: Dr. Gerald L. Bruns and Dr. Seamus Deane

Linda Margaret Chalk, Midland, Michigan
Major Subject: Psychology
Dissertation: The Effectiveness of a Possible Selves Intervention in Reducing College Women's Occupational Fears
Selves
Director: Dr. Naomi M. Meara

Seungjin Choi, Seoul, Republic of Korea
Major Subject: Electrical Engineering
Dissertation: Adaptive Blind Sources Separation Based on Unsupervised Learning
Director: Dr. Ruey-Wen Liu

Shirley Jane Dyke, Palos Heights, Illinois
Major Subject: Civil Engineering
Dissertation: Acceleration Feedback Control Strategies for Active and Semi-Active Control Systems: Modeling, Algorithm Development, and Experimental Verification
Director: Dr. Billie F. Spencer, Jr.

Teresa A. Elick, Fort Wayne, Indiana
Major Subject: Biological Sciences
Dissertation: Molecular Analysis of the Piggybac Transposable Element
Director: Dr. Malcolm J. Fraser, Jr.

Muriel Cottard, D'Auroure, France
Major Subject: Chemistry
Dissertation: Studies Directed Toward the Synthesis of Compounds Having Important Biological Activity: Anticancer Agents, lejimalides A and B and an Antibiotic, Madumycin I
Director: Dr. Paul M. Helquist

Shingo Ishii, Tokyo, Japan
Major Subject: Chemistry
Dissertation: Scope and Mechanistic Studies of Intramolecular C-H Insertion Reactions of (Cyclopentadienyl) Dicarbonyliron Carbene Complexes
Director: Dr. Paul M. Helquist

Todd Eric Johnson, Bradford, Pennsylvania
Major Subject: Theology
Dissertation: In Spirit and Truth: Pneumatology, Modernism and Their Relation to Symbols and Sacraments in the Writings of Evelyn Underhill
Director: Dr. Lawrence S. Cunningham

Karen Leigh Jones, Renton, Washington
Major Subject: Psychology
Dissertation: Discrimination of Two Aspects of Cognitive Social Intelligence from Academic Intelligence
Director: Dr. Jeanne D. Day

Padmini Kamath, Mumbai, India
Major Subject: Mathematics
Dissertation: Unstable Normal Maps on an Open Manifold Without Boundary
Director: Dr. E. Bruce Williams

Byunghan Kim, Seoul, Republic of Korea
Major Subject: Mathematics
Dissertation: Simple First Order Theories
Director: Dr. Anand Pillay

Meeyoung Kim, Seoul, Republic of Korea
Major Subject: Mathematics
Dissertation: A Barth-Lefschetz Type Theorem for Branched Coverings of Homogeneous Spaces
Director: Dr. Andrew J. Sommese

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Wesley Kirkpatrick, Portsmouth, Virginia
Major Subject: Philosophy
Dissertation: What to Make of Miss Fanny: Philosophical Reflections on Jane Austen's Mansfield Park
Director: Dr. Philip L. Quinn

Kris William Kukla, Freeport, Illinois
Major Subject: Physics
Dissertation: Measurements of Relativistic and Quantum Electrodynamic Effects in Heliumlike Argon Using Position-Sensitive Ultraviolet Spectroscopy
Director: Dr. A. Eugene Livingston

Michael Lattanzi, Washington, D.C.
Major Subject: Government
Dissertation: Imagination, Language and Being: The Question of Political Critique
Director: Dr. Fred R. Dallmayr

Maureen Kay Harley Mulligan, Dowagiac, Michigan
Major Subject: History
Dissertation: Common Cares: Women and the Family Farm in the Midwest, 1870-1930
Director: Dr. Walter Nugent

Sanjeevan Naguleswaran, Colombo, Sri Lanka
Major Subject: Physics
Dissertation: Gamma Ray Spectroscopy in the Mass 110 Region
Director: Dr. Umesh Garg

Nelson Luiz Passos, São Paulo, Brazil
Major Subject: Computer Science and Engineering
Dissertation: Improving Parallelism on Multi-Dimensional Applications: The Multi-Dimensional Retiming Framework
Director: Dr. Edwin Hsing-Mean Sha

Marie-France Paugam, Annevy, France
Major Subject: Chemistry
Dissertation: Transport of Saccharides and Catecholamines Mediated by Boronic Acid Carriers
Director: Dr. Bradley D. Smith

Terence John Pell, Vienna, Virginia
Major Subject: Philosophy
Dissertation: Liberalism, Community, and Interpretation: Ronald Dworkin's Neo-Hegelian Theory of Law and Politics
Director: Dr. William D. Solomon

Janice M. Poorman, Granger, Indiana
Major Subject: Theology
Dissertation: The Critics of Karl Rahner's Theology of the Universal Offer of Salvific Grace Through Jesus Christ
Director: Rev. Thomas O'Meara, O.P.

Maan Qazzaz, Oak Lawn, Illinois
Major Subject: Physics
Dissertation: Electron Paramagnetic Resonance in Magnetic Semiconductor Epitaxial Layers and Superlattices
Director: Dr. Jacek K. Furdyna

Judy Damasiewicz Randolph, Valparaiso, Indiana
Major Subject: Psychology
Thesis: Timing of Conjugal Loss in Late Life and Successful Outcome: A Life-Span Perspective
Director: Dr. Cindy Bergeman

John Lester Ruth, Nacogdoches, Texas
Major Subject: Theology
Dissertation: "A Little Heaven Below": Quarterly Meetings as Seasons of Grace in Early American Methodism
Director: Rev. James F. White

Donelle Rae Ruwe, Meridian, Idaho
Major Subject: English
Dissertation: Reconstructing Romanticism: Women Poets, the Creative Imagination, and Literary History
Director: Dr. Greg P. Kucich

Parthasarathy Seshadri, Madras, India
Major Subject: Materials Science & Engineering
Thesis: Metastable and Stable RMnO Thin Films and RMnO/EBCO Heterostructures (R=Er or Dy; EBCO = Er₃Ba₂Cu₃Oₓ+δ)
Director: Dr. Krishna Choudhary

Steven William Short, Midlothian, Illinois
Major Subject: Physics
Dissertation: Optical Investigations of the Quantum Confined Stark Effect in II-VI Semiconductor Heterostructures
Director: Dr. Jacek K. Furdyna

Bradley Dale Smith, Siloam Springs, Arkansas
Major Subject: Economics
Dissertation: The Effects of the Market for Corporate Control at the Firm Level: A Case Study Approach
Director: Dr. Martin H. Wolfson
Robert Joseph Szczerba, Rochester, New York
Major Subject: Computer Science and Engineering
Dissertation: New Cell Decomposition Techniques for Planning Optimal Paths
Co-Directors: Dr. Danny Z. Chen and Dr. John J. Uhren, Jr.

Jeffrey T. VanderWilt, Madison, Wisconsin
Major Subject: Theology
Dissertation: The Eucharist as Sacrament of Ecclesial Koinonia with Reference to the Contribution of Jean-Marie Tillard to Ecumenical Consensus on the Eucharist

Suhas Prabhakar Vaze, Pune, India
Major Subject: Mechanical Engineering
Dissertation: Response and Buckling of Elastic-Plastic Square Tubes Under Cyclic Bending
Director: Dr. Edmundo Corona

Pamela Rae Westmark, Dubuque, Iowa
Major Subject: Biochemistry
Dissertation: 1. Selective Facilitated Transport of Biological Compounds Through a Phospholipid Bilayer using Boronic Acid Complexation
2. Influence of Eluent Anions in Boronate Affinity Chromatography
Director: Dr. Bradley D. Smith

Yutong Zhang, Taiyuan, People’s Republic of China
Major Subject: Biological Sciences
Dissertation: Vascular Capacitance and its Regulation in Rainbow Trout (Oncorhynchus Mykiss)
Director: Dr. Kenneth R. Olson

The Law School

THE DEGREE OF LEGUM MAGISTER ON:
Cristóbal de Aldecoa, Buenos Aires, Argentina
Anneloes Groen, Cum Laude, Rotterdam, Netherlands
Jean-Marc Grospperrin, Magna Cum Laude, Clermont-Ferrand, France
Victor M. Moreno Rodriguez, Torreon Coahuila, Mexico
Jose Alfredo Reygadas Del Valle, Mexico City, Mexico
Liang-Ching Tsai (Grace), Taipei, Taiwan
Alfred Zehner, Mariapfarr, Austria

THE DEGREE OF JURIS DOCTOR ON:
John Joseph Flynn, West Warwick, Rhode Island
Christine Marie Tucker, Charleroi, Pennsylvania

The Graduate School

THE DEGREE OF MASTER OF FINE ARTS ON:
Robert Thomas Archambeau, Chicago, Illinois
Major Subject: English
Thesis: Victory Over the Sun
Director: Prof. John E. Matthias

THE DEGREE OF MASTER OF MEDIEVAL STUDIES ON:
Michael Machias Waddell, Owatonna, Minnesota

THE DEGREE OF MASTER OF MUSIC ON:
Janet N. Brooks, Nashville, Tennessee

THE DEGREE OF MASTER OF ARTS ON:
Vilma C. Balmaceda, Lima, Peru
Major Subject: International Peace Studies

Patricia Ann Noonan Bogdan, Fairfax, Virginia
Major Subject: Theology

Judith Head Bullock, Louisiville, Kentucky
Major Subject: Theology
Paulette M. Chapman, Des Moines, Iowa  Major Subject: Theology

Hilary Ann Condon, De Witt, Iowa  Major Subject: Psychology

Catia Cecilia Confortini, Rezzato, Italy  Major Subject: International Peace Studies

Hal Robert Culbertson, Delavan, Illinois  Major Subject: International Peace Studies

Mary Grace B. Dairo, Butuan City, Philippines  Major Subject: International Peace Studies

Larissa Deriglazova, Tomsk, Russia  Major Subject: International Peace Studies
Thesis: Soldiers’ Mothers: A Case Study of a Social Movement in the Context of Russian Political Change
Director: Dr. Mark A. Chaves

Margaret Ann Desmond, Bloomfield Hills, Michigan  Major Subject: International Peace Studies

Radoslav S. Dimitrov, Sofia, Bulgaria  Major Subject: International Peace Studies

Beatrijs Elsen, Brugge, Belgium  Major Subject: International Peace Studies

Theresa M. Fifer, Toledo, Ohio  Major Subject: Theology

David Paul Furlonger, C.S.S.R., London, Canada  Major Subject: Theology

Christine A. Green, Highland, Indiana  Major Subject: Art History
Thesis: The Natural Gas Boom in the Midwest: A Study of Architectural History and Patronage
Director: Dr. Kathleen A. Pyne

Matthew Ryan Guynn, Indianapolis, Indiana  Major Subject: International Peace Studies

Heba Hage, Beirut, Lebanon  Major Subject: International Peace Studies

Anselm Hagedorn, Hemmingen, Germany  Major Subject: Theology

Braey Vauncille Hill II, Mishawaka, Indiana  Major Subject: Theology

Mark Todd Johnson, Madison, Wisconsin  Major Subject: Theology

Erin Joyce, Mansfield, Ohio  Major Subject: Government

Timothy Christopher Keating, Phoenix, Arizona  Major Subject: Theology

Anupam Khanuja, New Delhi, India  Major Subject: International Peace Studies

Donald Jay Koyle, London, Canada  Major Subject: Theology

Emmanuel Kwasi Kuada, Accra, Ghana  Major Subject: International Peace Studies

Stefanie Jo Lieland, Lawrenceburg, Indiana  Major Subject: Psychology

Carol Ann Lind, Smithfield, Utah  Major Subject: Art History
Director: Dr. Robert R. Coleman

Pedro Lopez Jimenez, Ventura, California  Major Subject: Theology

Patricia Anne Lynn, Philadelphia, Pennsylvania  Major Subject: International Peace Studies

Tatyana Alexeevna Makogon, Nikolaev, Ukraine  Major Subject: Psychology

Thomas Daniel Manning, Lake Oswego, Oregon  Major Subject: Theology

Eerik Marmei, Tartu, Estonia  Major Subject: International Peace Studies

Charles Donald Martel, St. Louis, Missouri  Major Subject: Theology

Joseph F. Nuzzi, Upper Saddle River, New Jersey  Major Subject: Theology

Amy Sue Humphrey O’Brien, South Bend, Indiana  Major Subject: Communication Arts
Toshiko Oino, Yokohama, Japan
Major Subject: International Peace Studies
Thesis: Problems and Opportunities in UN Peacekeeping: Lessons from Akashi’s Way of Conflict Management
Director: Dr. Robert C. Johansen

Le Pan, Nanjing, People’s Republic of China
Major Subject: International Peace Studies

Matthew Pennington, Scotts Valley, California
Major Subject: International Peace Studies

Mónica Peñuela Jaramillo, Bogotá, Colombia
Major Subject: International Peace Studies

Marie-Eileen Burke Picard, Aurora, Ohio
Major Subject: International Peace Studies

Oana Plescan-Popa, Cluj-Napoca, Romania
Major Subject: International Peace Studies

Rose Imelda Ramos, San Antonio, Texas
Major Subject: International Peace Studies

Vadim Grigorievitch Roussin, Moscow, Russia
Major Subject: International Peace Studies

Glenn Rymsza, South Bend, Indiana
Major Subject: International Peace Studies

Jessica L. Schiller, Belmont, Michigan
Major Subject: International Peace Studies

John Paul Sherk, Middlebury, Indiana
Major Subject: International Peace Studies

Robert J. Simon, Clarks Summit, Pennsylvania
Major Subject: International Peace Studies

Boreta Ann Singleton, I.H.M., Philadelphia, Pennsylvania
Major Subject: International Peace Studies

Julianne Smith, South Bend, Indiana
Major Subject: International Peace Studies

Carrie Anne Trollinger, Ormond Beach, Florida
Major Subject: International Peace Studies

Kimberly Anne Wallace, Smithtown, New York
Major Subject: Psychology
Thesis: Hardiness in Later Life: A Preliminary Investigation
Director: Dr. Cindy Bergeman

Stephen John Zabrocki, Wolf Point, Montana
Major Subject: Theology

THE DEGREE OF MASTER OF SCIENCE ON:

Pieder Beeli, South Bend, Indiana
Major Subject: Physics

Tami L. Elton, Roseau, Minnesota
Major Subject: Biological Sciences
Thesis: Venereal Transmission of La Crosse Virus by Aedes Albopictus
Director: Dr. George B. Craig, Jr.

Betty Kreuger, New Orleans, Louisiana
Major Subject: Biological Sciences
Thesis: Parameters of Infection by Ascogregarina SPP. (Apicomplexa: Lecudinidae) on Container-Breeding Aedes SPP. (Diptera: Culicidae)
Director: Dr. George B. Craig, Jr.

THE DEGREE OF MASTER OF SCIENCE IN AEROSPACE ENGINEERING ON:

Bruce Andrew Hardy, Durham, New Hampshire
Thesis: Interaction of Acoustic, Entropic, and Vortical Waves with a Plane Shock
Director: Dr. Hafiz M. Atassi

THE DEGREE OF MASTER OF SCIENCE IN CHEMICAL ENGINEERING ON:

Sandeep Gupta, New Delhi, India
Director: Dr. Arvind Varma
THE DEGREE OF MASTER OF SCIENCE IN CIVIL ENGINEERING ON:

Beth Lee Mullenbach, La Crosse, Wisconsin
Thesis: Acoustic Imaging of Sediments
Director: Dr. Laura J. Pyrak-Nolte

THE DEGREE OF MASTER OF SCIENCE IN COMPUTER SCIENCE & ENGINEERING ON:

Hong Yan, Fuzhou, People's Republic of China
Director: Dr. David L. Cohn

Kaixiang Zhong, Beijing, People's Republic of China
Thesis: Abstract Data Structures and Object-Oriented Design for High Performance Numerical Linear Algebra
Director: Dr. Andrew Lumsdaine

THE DEGREE OF MASTER OF SCIENCE IN ENVIRONMENTAL ENGINEERING ON:

Jaime Moises Gutierrez Carvajal, Panama City, Panama
Major Subject: Civil Engineering
Thesis: Sequencing Batch Reactors for Wastewater Treatment in the Republic of Panama
Director: Dr. Lloyd H. Ketchum, Jr.

THE DEGREE OF MASTER OF SCIENCE IN GEOLOGICAL SCIENCES ON:

James Albert O'Neill, Jr., Short Hills, New Jersey
Major Subject: Civil Engineering
Thesis: Development of an ICP-MS Analytical Technique for the Quantification of the Platinum Group Elements (PGES) and Gold in Geological Samples Using Cation Exchange Pretreatment
Director: Dr. Clive R. Neal

THE DEGREE OF MASTER OF SCIENCE IN MECHANICAL ENGINEERING ON:

Richard Joseph Caspar, South Windsor, Connecticut
Thesis: Experimental and Numerical Study of Shear Localization as an Initiation Mechanism in Energetic Solids
Co-Directors: Dr. James J. Mason and Dr. Joseph M. Powers

Fen Li, Zhejiang, People's Republic of China
Thesis: Advanced Friction Model in Manufacturing Process Simulation
Director: Dr. Steven Schmid

Jeffrey Joseph Scherock, Traverse City, Michigan
Thesis: Modeling Unsteady Potential Flows in Coupled Cascades
Director: Dr. Hafiz M. Atassi

Jian Su, Hohhot, People's Republic of China
Thesis: Automatic Differentiation in Robust Optimization
Director: Dr. John E. Renaud
The College of Business Administration
In the Graduate Division

THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION ON:

Christopher Robert Kavanagh, Bolingbrook, Illinois

THE DEGREE OF MASTER OF SCIENCE IN ADMINISTRATION ON:

Gail Lynn Burton Blackburn, Magna Cum Laude, Hammond, Indiana
Julie Scott Bowers, South Bend, Indiana
Paula M. Brush, Alliance, Ohio
Myrtie Kimmins Coleman, South Bend, Indiana
Irene Dunn, S.S.J., Summa Cum Laude, Erdenheim, Pennsylvania
Céline Dupuis, S.S.A., Cum Laude, Lachine, Canada
Christine Ereiser, O.S.B., Magna Cum Laude, Tulsa, Oklahoma
Russell Edward Fish, Cum Laude, South Bend, Indiana
Lawrence D. Ford, O.F.M., Cum Laude, Olean, New York
Keith D. Fulks, Cum Laude, Mishawaka, Indiana
Mary Antoinette Vassallo Hoste, East Lansing, Michigan
Martha Ellen Kummerer, Magna Cum Laude, South Bend, Indiana
Peter Daniel Lanser, Cum Laude, South Bend, Indiana
Maureen Lynn McNamara, Magna Cum Laude, Peoria, Illinois
Catherine Lynné Powers, Magna Cum Laude, Elkhart, Indiana
Mary Faut Rodts, Cum Laude, Oak Park, Illinois
Ruoping Zhu, Shanghai, People’s Republic of China
David E. Ziege, Cum Laude, Granger, Indiana

The College of Arts and Letters

THE DEGREE OF BACHELOR OF FINE ARTS ON:

Benjamin Richardson Foos, Simpsonville, Kentucky

THE DEGREE OF BACHELOR OF ARTS ON:

Estevan Lorenzo Almanza, El Paso, Texas
Nicole Marie Amato, Portland, Maine
Katherine Anne Babka, Belleair, Florida
Joseph Bryan, Wilkes-Barre, Pennsylvania
John Ryan Burke, Rapid City, South Dakota
James Dunn Burns II, Portland, Oregon
Vincenzo Donaldo Carrasco, Indiantown, Florida
Kim Chavez, Jacksonville, Arkansas
Hugh H. Corkery, Sacramento, California
Michael John Doherty II, Magna Cum Laude, Washoe Valley, Canada
Jennifer Ann Earls, Azle, Texas
Ryan Patrick Halford, Arlington, Texas
Sarah Elizabeth Jeffery, Cum Laude, Janesville, Wisconsin
Christopher Alan Lary, Delmar, Iowa
Theo Henry McCourtney, Katonah, New York
Jane Allison Phinney, Edwardsburg, Michigan
Anthony Edward Pillari, Summa Cum Laude, Bay Village, Ohio
Sarah Breckinridge Reishman, Charleston, West Virginia
Eamon Patrick Shea, Jacksonville, Florida
Darcy Kyung Yaley, Mariposa, California

The College of Science

THE DEGREE OF BACHELOR OF SCIENCE ON:

Shelby Dwight Brown, Independence, Kansas
Kyle Hutchins Friedman, The Woodlands, Texas
Shane Taylor Igoe, Saint Francisville, Louisiana
Seth Turner Keene, Magna Cum Laude, Deadwood, South Dakota
Jamie Lynn Webb Kennedy, Summa Cum Laude, Fairfax, Virginia
Charles Kim Shin, Lima, Ohio
Amalia Villaflan, Hammond, Indiana
The College of Engineering

THE DEGREE OF BACHELOR OF SCIENCE ON:

Mary Nahasbah Etsitty, Glendale, Arizona

THE DEGREE OF BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING ON:

Jason Lee Schroeder, Magna Cum Laude, Findlay, Ohio

THE DEGREE OF BACHELOR OF SCIENCE IN CIVIL ENGINEERING ON:

Catherine Nell Price, Cresco, Pennsylvania

THE DEGREE OF BACHELOR OF SCIENCE IN COMPUTER ENGINEERING ON:

Michael Tecson, Hershey, Pennsylvania

THE DEGREE OF BACHELOR OF SCIENCE IN COMPUTER SCIENCE ON:

Ryan Patrick Malayter, Valparaiso, Indiana

THE DEGREE OF BACHELOR OF SCIENCE IN ENGINEERING & ENVIRONMENTAL SCIENCE ON:

Scott Dennis Horrigan, Buffalo, New York

THE DEGREE OF BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING ON:

Robert Plaxton Bolton, Greensboro, North Carolina
Peter Francis Goyer, Shaker Heights, Ohio

The College of Business Administration

In the Undergraduate Division

THE DEGREE OF BACHELOR OF BUSINESS ADMINISTRATION ON:

Robert Anthony De La Riva, São Paulo, Brazil
Glen James Hoffman, Warren, New Jersey
Linda LaFaye Howell, Nesbit, Mississippi
Gregory Sean Lane, Austin, Texas
William Paul Lanza, Dumfries, Virginia
William Michael Leisen, East Meadow, New York
Michael Sean McCullough, Chaska, Minnesota
James Frederick McEvoy, Jr., Henderson, Nevada
Curtis Geoffrey Miller, Pittsburgh, Pennsylvania
Jennifer Lynn Moore, Salt Lake City, Utah
Jose Alberto Perez, Jr., San Antonio, Texas
Edward Jet Salazar, Torrance, California
Gregory Jason Sinnott, Albany, New York
Christopher Carl Sloan, Rochester, New York
Susan Joyce Tate, Magna Cum Laude, Pittsburgh, Pennsylvania
James Tremante III, Wilton, Connecticut
Zane Stephen Way, Boise, Idaho
Ceremonial garments worn at academic functions take their meaning from the original centers of learning of the Western world in the Church of the Middle Ages. Caps, hoods and gowns of the early students and monks have been held through the centuries to be traditionally symbolic of the scholarly devotion so basic to education and to the deliberate and orderly evolution of knowledge.

The introduction of classical studies, the gradual rise of the great universities across Europe, and the ever-increasing awareness of the decisive role of education in the entire development of civilization influenced leaders among academicians in their desire for a singular identity. In the attempt to create this differentiation, educators fell upon the medieval system of classic heraldry, whereby the coat of arms, assorted ornamental trappings, and patterns of colorful design had been adopted to denote the distinctive character of designated chivalric orders. The function of "pedagogical heraldry" became, then, simply identification. As such, measures were taken to signify through distinctive markings on the academician's attire the institution that had granted the degree, the field of learning in which the degree had been earned, and the level of the degree-bachelor, master or doctorate.

Of the three pieces of academic attire, the cap, the gown and the hood, it is the hood that offers the most abundant and most readily discernable information about its owner. The inner lining of the hood identifies the institution at which the individual earned the degree. Some schools have adopted two-color patterns and introduced chevrons and bars in various designs to set themselves apart from other institutions. The velvet trim bordering the hood indicates the major field of learning, or faculty, in which the degree has been earned. The list at the conclusion of this section will explain this relationship. A final feature of the hood concerns its length and width and distinguishes further between holders of bachelor's, master's, and doctor's degrees. The length of the hood for the bachelor's degree is three feet, closed at the bottom, and the velvet border is two inches. At Notre Dame, individuals receiving a bachelor's degree do not wear a hood. A master's degree holder has a hood three and one half feet in length with a three inch wide border, and is slit at the bottom. Those individuals with a doctorate degree wear a hood four feet in length, open at the bottom, with a five inch border.

The gown is usually black in color but some American universities, including Notre Dame, have adopted distinctive colors for their robes. Notre Dame doctorate degree robes are blue, reflecting one of its official colors.

The cut of the gown aids in differentiating between the three levels of degrees. The bachelor's gown is relatively simple and falls in straight lines from an elaborate yoke. It may be recognized most readily by the long, pointed sleeves. The master's gown is somewhat fuller and bears no adornment. The sleeves are oblong in shape and open at the wrist, with the rear part of the oblong square cut while the front edge has a cutaway are. The doctor's gown is more elaborate with velvet panels down the front and around the neck of the garment. The sleeves are bellshaped at the end and have three bars of the same material as the front panels at the upper portion of the arm. It is cut rather full and may be ornamental in color. Notre Dame's doctoral gown has royal blue velvet front panels with the University's shield embroidered in gold. The royal blue sleeve chevrons are outlined in gold.

The mortarboard or Oxford-type cap has been adopted throughout most universities in the United States, although Notre Dame's doctoral cap is a royal blue tam. Colored tassels are usually worn by holders of the bachelor's and master's degrees. These denote the field of learning. The list on the next page indicates the tassel colors. Gold tassels are reserved for those with doctorate degrees and governing officers of educational institutions.

**Processional Banners (Gonfalons)**

The gonfalon, a banner that hangs from a crosspiece or frame, originated in the medieval republics of Italy as an ensign of state or office. Gonfalons have been adopted in many universities around the world as college or institutional insignias, and many use them to identify and lead colleges and schools within the university in academic procession. The nine gonfalons represent the University and the eight colleges and schools of Notre Dame. The lower half of the gonfalon consists of a shield with a clear blue field and a cross of gold. This is part of the armorial seal designed by Pierre de Chaignon la Rose of Harvard in 1931. The heraldic colors (gold and blue) are symbolic of the Mother of God, to whom, Father Sorin first dedicated Notre Dame. As the shield's base are two wavy lines (indicating the a Lacu, "of the Lake", in the University's official title), and above them to the left is a star, another emblem of the Virgin, Star of the Sea. The cross represents the Congregation of Holy Cross, which founded Notre Dame; an institution of learning is denoted by the open book. The phrase “Vita, Dulcedo, Spes,” taken from the ancient prayer to the Virgin, the Salve Regina, celebrates her as ‘life, sweetness, and hope.”

Gonfalons designed by Paul Wieber of Notre Dame Publications and Graphic Services, commissioned by Watra Church Goods, Chicago, and manufactured by Slabbinck of Brugge, Belgium.
### Faculty Colors

<table>
<thead>
<tr>
<th>Field</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Maize</td>
</tr>
<tr>
<td>Arts, Letters, Humanities</td>
<td>White</td>
</tr>
<tr>
<td>Commerce, Accountancy, Business</td>
<td>Drab</td>
</tr>
<tr>
<td>Dentistry</td>
<td>Lilac</td>
</tr>
<tr>
<td>Economics</td>
<td>Copper</td>
</tr>
<tr>
<td>Education</td>
<td>Light Blue</td>
</tr>
<tr>
<td>Engineering</td>
<td>Orange</td>
</tr>
<tr>
<td>Fine Arts, Including</td>
<td>Brown</td>
</tr>
<tr>
<td>Architecture</td>
<td>Russet</td>
</tr>
<tr>
<td>Journalism</td>
<td>Crimson</td>
</tr>
<tr>
<td>Law</td>
<td>Purple</td>
</tr>
<tr>
<td>Library Science</td>
<td>Lemon</td>
</tr>
<tr>
<td>Medicine</td>
<td>Green</td>
</tr>
<tr>
<td>Music</td>
<td>Pink</td>
</tr>
<tr>
<td>Nursing</td>
<td>Apricot</td>
</tr>
<tr>
<td>Optometry</td>
<td>Sea Foam Green</td>
</tr>
<tr>
<td>Oratory (Speech)</td>
<td>Silver Gray</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Olive Green</td>
</tr>
<tr>
<td>Philosophy</td>
<td>Dark Blue</td>
</tr>
<tr>
<td>Physical Education</td>
<td>Sage Green</td>
</tr>
<tr>
<td>Podiatry-Chiroprody</td>
<td>Nile Green</td>
</tr>
<tr>
<td>Public Administration, Including</td>
<td>Peacock Blue</td>
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<tr>
<td>Foreign Service</td>
<td>Salmon Pink</td>
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<tr>
<td>Social Science</td>
<td>Golden Yellow</td>
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<td>Public Health</td>
<td>Cream</td>
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<td>Citron</td>
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<tr>
<td>Theology</td>
<td>Scarlet</td>
</tr>
<tr>
<td>Veterinary Science</td>
<td>Gray</td>
</tr>
</tbody>
</table>

Old Gold and Royal Blue in Hood Denotes a Notre Dame Degree