### University Calendar For 1983-84

#### Winter Quarter, 1983
- January 3-4 (Monday-Tuesday)
- January 5 (Wednesday)
- January 31-February 4 (Monday-Friday)
- February 8 (Tuesday)
- March 15 (Tuesday)
- March 18 (Friday)

#### Spring Quarter, 1983
- March 24-25 (Thursday-Friday)
- March 26 (Saturday)
- April 1-2 (Friday-Saturday)
- April 29 (Friday)
- May 2-6 (Monday-Friday)
- May 23-27 (Monday-Friday)
- June 6 (Monday)
- June 9 (Thursday)

#### Summer Quarter, 1983
- June 13-14 (Monday-Tuesday)
- June 16 (Wednesday)
- July 4 (Monday)
- July 5 (Tuesday)
- July 18-19 (Monday-Tuesday)
- July 19 (Tuesday)
- July 20 (Wednesday)
- July 25-29 (Monday-Friday)
- August 8 (Monday)
- August 22 (Monday)
- August 24 (Wednesday)

#### Fall Quarter, 1983
- September 19-21 (Monday-Wednesday)
- September 22 (Thursday)
- October 26 (Wednesday)
- October 29 (Friday)
- October 31-November 4 (Monday-Friday)
- November 12 (Saturday)
- November 24-26 (Thursday-Saturday)
- December 6 (Tuesday)
- December 9 (Friday)

#### Winter Quarter, 1984
- January 3-4 (Tuesday-Wednesday)
- January 5 (Thursday)
- February 6-10 (Monday-Friday)
- February 8 (Wednesday)
- March 14 (Wednesday)
- March 16 (Friday)

---

**NOTE:** Deadlines for degree requirements described on pp. 21-22.
Contents

2 University Calendar for 1983-84
3 Where To Write
4 Campus Map
6 Graduate School Administration
   Graduate Council
7 Board of Trustees
   Administration
8 Majors and Degrees Available

The Graduate School
10 Introduction

Admission and Registration
10 Types of Admissions
11 Admission Procedures
12 Readmission
   Registration Procedures
   Family Educational Rights and Privacy
   Act
   Student Identification Number

Fees, Residency Classification, and
Financial Aid
12 University Fees
13 Residency Classification for Tuition
   Purposes
   Academic Common Market
   Financial Aid

General Regulations of
The Graduate School
14 Advisor/Major Professor
   Prerequisites
   Explanation of
   Course Listings
   Course Loads
   Change of Registration
   Grading System

Where To Write
The University of Tennessee, Knoxville
Knoxville, TN 37996
Office Hours: 8:00 a.m.-5:00 p.m.
Monday-Friday

The Graduate School
Diana C. Lopez, Director of Graduate
Admissions
Clea J. Greenawalt, Assistant Director of
Graduate Admissions
218 Student Services Building

Regulations Subject To
Change
Any and all course offerings, academic requirements and other information contained in this publication are subject to change and/or revocation without notice. Anyone interested in the precise course offering, academic requirement at a given time, or other special information should make inquiry in advance.

The University of Tennessee, Knoxville does not discriminate on the basis of race, sex, color, religion, national origin, age, handicap, or veteran status in provision of educational opportunities or employment opportunities and benefits.
UTK does not discriminate on the basis of sex or handicap in the education programs and activities which it operates, pursuant to the requirements of Title IX of the Education Amendments of 1972, Pub. L. 92-318; and Section 504 of the Rehabilitation Act of 1973, Pub. L. 93-112; respectively. This policy extends to both employment by and admission to the University.
Inquiries concerning Title IX and Section 504 should be directed to the Office of the Vice Chancellor for Planning and Administration, 525 Andy Holt Tower, 974-4391. Charges of violation of the above policy should also be directed to the Office of the Vice Chancellor for Planning and Administration.
The University of Tennessee, Knoxville

Main Campus

Administration Parking Garage (APG) G-9
Alumni Hall (AH) B-8
Alumni Memorial Auditorium-Gymnasium (GYM) D-10
Andy Holt Avenue Apartments (AD) E-2
Andy Holt Tower (AHT) F-10
Army Reserve Training Center (RA) G-7
Art & Architecture (AA) E-7
Arts & Crafts (Laurel House) (ACH) A-7
Aquatic Center (AQC) F-2
Ayers Hall (A) C-11

Berry Hall (BH) E-12
Black Cultural Center (BCC) C-8
Tom Black Track & Recreation Area (BT) E-5
Clarence Brown Theatre (CBT) D-7
Buehler Hall (BU) C-11

Carousel Theatre (CT) E-7
Carrick Hall (CAH) D-4

Agricultural Campus

Agricultural Engineering Bldgs. (AE) K-3
C.E. Brehm Animal Science Lab (ASB) K-1
Corn-Cotton Bldg. (CC) J-2
Dairy Products Bldg. (DP) J-1
Fiber Research Laboratory (FL) L-4
Tennessee Division of Forestry (FOR) M-4
J.H. McLeod Food Technology Bldg. (FT) J-1
Greenhouses (GH) I-2
McGord Hall (MC) I-1

Morgan Hall (MH) J-2
Plot Barn (PB) K-4
Poultry Diagnostic Laboratory (PO) L-4
Power Plant (PPL) I-3
Printing and Supply (PR) M-4
Plant Sciences (Ellington Hall) (PS) K-3
Plant Sciences Annex (PSX) L-3
Spinning Lab (SL) L-4
College of Veterinary Medicine (Clyde York Bldg.) (V) M-2

Geology and Geography Bldg. (G&G) C-11
Gibbs Hall (GIB) F-7
Glocker Business Administration Bldg. (G) C-8
Greve Hall (GRH) C-7

Harris Home Economics Bldg. (HE) B-11
Health, Physical Education & Recreation (HPR) E-5
Hearing & Speech Center (H&S) E-10
Henson Hall (HII) C-8
Hesler Biology Bldg. (H) C-10
Hess Hall (HEH) D-6
Hodges Undergraduate Library (UGL) C-8
Hopscotch (HO) D-5
Hoskins (Main) Library (LIM) B-10
Humanities & Social Sciences Bldg. (HSS) E-6
Humes Hall (HUH) E-4

Information Booth (I) E-8
International House (IH) A-8
The Graduate School Administration

L. Evans Roth, B.A. M.S., Ph.D., Vice Chancellor for Graduate Studies and Research
Clarence W. Minkel, B.A., M.A., Ph.D., Dean for Graduate Studies
Mary P. Richards, B.A., M.A., Ph.D., Associate Dean for Graduate Studies
Thomas H. Klindt, B.S., M.S., Ph.D., Assistant Dean for Graduate Studies
Marla P. Peterson, B.A., M.A., Ph.D., Dean for Research
Thomas L. Bell, B.A., M.A., Ph.D., Assistant Dean for Research
Diana C. Lopez, B.S., M.S., Director, Graduate Admissions and Records
Ben Granger, B.A., M.S.W., M.P.A., Ph.D., Dean, School of Social Work
Kenneth E. Harwell, B.S., M.S., Ph.D., Dean, UT Space Institute
A. A. Mason, B.S., Ph.D., Associate Dean, UT Space Institute
Marvin Goodman, B.S., M.S., Ph.D., Director, Kingsport Graduate Program
David A. Johnson, B.A., M.C.P., Ph.D., Director, Graduate School of Planning
W. Edgar Barnett, B.S., M.S., Ph.D., Director, UT-Oak Ridge Graduate School of Biomedical Sciences
William F. Brandes, M.S., P.E., Director, Water Resources Research Center
Jerry D. Westbrook, B.E., M.S., Ph.D., Director, Nashville Graduate Engineering Program and Oak Ridge Resident Graduate Program
Ann E. Prentice, B.A., M.L.S., D.L.S., Director, Graduate School of Library and Information Science
Kenneth W. Heathington, B.S., M.S., Ph.D., Director, Transportation Center
Edward Lumsdale, B.S., M.S., Ph.D., Director, Energy, Environment, and Resources Center

The Graduate Council
Membership January 1, 1982

Ex Officio Members
L. Evans Roth, Vice Chancellor
Clarence W. Minkel, Dean
Thomas Hood, Chairperson for Research Council
Mary P. Richards, Associate Dean
Thomas H. Klindt, Assistant Dean

Appointed Members
Dr. W. Edgar Barnett Dec. 31, 1982
Dr. Kenneth Heathington Dec. 31, 1982
Dr. David A. Johnson Dec. 31, 1982
Dr. Richard J. Courtney Dec. 31, 1982

College or Unit
Col. of Agriculture Dr. Luther Wilhelm Dec. 31, 1983
Dr. David J. Barnaby Dec. 31, 1984
Dr. Charles B. Garrison Dec. 31, 1982
Dr. Alan D. Fletcher Dec. 31, 1982
Dr. Don B. Franks Dec. 31, 1984
Dr. Paul A. Wishart Dec. 31, 1982
Dr. Schuyler Huck Dec. 31, 1982
Dr. Lester Knight Dec. 31, 1983
Dr. John Lovell Dec. 31, 1983
Dr. Charles F. Moore Dec. 31, 1984
Dr. Marcil Milligan Dec. 31, 1983
Col. of Home Economics Dr. Imogene Ford Dec. 31, 1983
Dr. Patricia L. Walne Dec. 31, 1982
Dr. John H. Fisher Dec. 31, 1982
Dr. T. McN. Simpson Dec. 31, 1982
Dr. Charles O. Jackson Dec. 31, 1982
Graduate Student Council Mr. George Daniel Apr. 30, 1983
Ms. Lindy Gilbert Apr. 30, 1983
Col. of Nursing Dr. Sylvia E. Hart Dec. 31, 1983
School of Social Work Dr. Roger M. Noe Dec. 31, 1984
Dr. Gideon Fryer Dec. 31, 1983
UT Space Institute Dr. Robert L. Young Dec. 31, 1982

Proxy
Dr. Curtis Melton
Dr. Ronald E. Shrieves
Dr. Norman E. Dittrich
Dr. Kent M. Sidel
Dr. Donald J. Dickenson
Dr. David Craig
Dr. Estil Alexander
Dr. Gerald Ubben
Dr. George Wiegars
Dr. David W. Goodpasture
Dr. Jeffrey W. Hodgson
Dr. John T. Smith
Dr. Paul G. Huray
Dr. Anne H. Hopkins
Dr. Thomas G. Hallam
Dr. Harry Jacobson
Dr. Mildred Fenske
Dr. Robert Bonovich
Dr. George W. Ayres
Dr. Maurice A. Wright
Dr. R. G. Schaub
The University of Tennessee

Board of Trustees
From Congressional Districts

Ex Officio Members
- Buford Goldstein, First, June 1, 1984
- A. B. Long, Jr., Knoxville, Second, June 1, 1986
- Lookout Mountain, Third, June 1, 1988
- William M. Johnson, Sparta, Fourth, June 1, 1987
- Marcia A. Echols, Nashville, Fifth, June 1, 1991
- His Excellency, Elizabethton, Sixth, July 1, 1990
- Scott Probasco, Jr., Seventh, June 1, 1988
- Tom Elam, Union City, Eighth, June 1, 1986
- R. Lee Winchester, Memphis, Ninth, June 1, 1984

Ex Officio Members
- Buford Goldstein, First, June 1, 1984
- A. B. Long, Jr., Knoxville, Second, June 1, 1986
- Lookout Mountain, Third, June 1, 1988
- William M. Johnson, Sparta, Fourth, June 1, 1987
- Marcia A. Echols, Nashville, Fifth, June 1, 1991
- His Excellency, Elizabethton, Sixth, July 1, 1990
- Scott Probasco, Jr., Seventh, June 1, 1988
- Tom Elam, Union City, Eighth, June 1, 1986
- R. Lee Winchester, Memphis, Ninth, June 1, 1984

From Anderson, Bedford, Coffee, Franklin, Lincoln, Moore, and Warren Counties

TERM EXPIRES
- Buford Goldstein, First, June 1, 1984
- A. B. Long, Jr., Knoxville, Second, June 1, 1986
- Lookout Mountain, Third, June 1, 1988
- William M. Johnson, Sparta, Fourth, June 1, 1987
- Marcia A. Echols, Nashville, Fifth, June 1, 1991
- His Excellency, Elizabethton, Sixth, July 1, 1990
- Scott Probasco, Jr., Seventh, June 1, 1988
- Tom Elam, Union City, Eighth, June 1, 1986
- R. Lee Winchester, Memphis, Ninth, June 1, 1984

TERM EXPIRES
- James F. Harrison, First, June 1, 1990

Student Member
- Jan Petri, July 1, 1983

Officers of the Board
- Governor Lamar Alexander, Chairman
- Ann Baker Furrow, Vice Chairman
- Edward J. Boling, President
- A. David Martin, Treasurer
- Beauchamp Brogan, Secretary
- Linda Logan, Assistant Secretary

University Administration
- Edward J. Boling, B.S., M.S., Ed.D., President of the University
- Joseph E. Johnson, A.B., A.M., Ed.D., Executive Vice President and Vice President for Development
- John W. Pradis, B.S., M.S., Ph.D., Vice President for Academic Affairs and Research
- W. W. Armistead, D.V.M., M.S., Ph.D., Vice President for Agriculture
- Emerson H. Fly, B.S., C.P.A., Vice President for Business and Finance
- James C. Hunt, A.B., M.S., M.D., Vice President for Health Affairs
- Robert S. Hutchison, B.S., M.B.A., Vice President for Public Service and Continuing Education
- Beauchamp E. Brogan, B.S., LL.B., J.D., General Counsel, Secretary of Board of Trustees
- Andrew J. Kozar, B.S., A.M., Ph.D., Executive Assistant to the President

UT, Knoxville Administration
- Jack E. Reese, A.B., A.M., Ph.D., Chancellor
- Luke Ebersole, A.B., A.M., Ph.D., Vice Chancellor for Planning and Administration
- Walter R. Hamond, B.S., M.S., Ph.D., Vice Chancellor for Academic Affairs
- L. Evans Roth, A.B., M.S., Ph.D., Vice Chancellor for Graduate Studies and Research
- Homer S. Fisher, B.S., M.B.A., Vice Chancellor for Business and Finance
- Howard F. Aldman, B.S., A.M., Ed.D., Vice Chancellor for Student Affairs
- Clarence W. Minkel, B.A., M.A., Ph.D., Dean of Graduate Studies
- Marla P. Peterson, B.A., M.A., Ph.D., Dean for Research
- O. Glenn Hall, B.S., M.S., Ph.D., Dean of the College of Agriculture
- Roy F. Knight, B.A., M. Arch., Dip. D’Etudes, Dean of the School of Architecture
- C. Warren Neel, B.S., M.B.A., D.B.A., Dean of the College of Business Administration
- Donald G. Hileman, B.S., M.S., Ph.D., Dean of the College of Communications
- William H. Coffield, B.S., M.A., Ph.D., Dean of the College of Education
- Robert E. Weaver, B.S., Ch.E., M.S., M.A., Ph.D., Dean of the College of Engineering
- Nancy H. Belick, B.S., M.S., Ph.D., Dean of the College of Home Economics
- Kenneth L. Penegar, A.B., J.D., LL.M., Dean of the College of Law
- Robert G. Landen, A.B., A.M., Ph.D., Dean of the College of Veterinary Medicine
- Joseph P. Goddard, B.S., M.S., Ed.D., Dean of the Division of Continuing Education
- John J. McDow, B.S., M.S., Ph.D., Dean of Admissions (Undergraduate) and Records
<table>
<thead>
<tr>
<th>MAJOR</th>
<th>DEGREE</th>
<th>ADMISSION TEST REQUIRED</th>
<th>ADDITIONAL REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>GRE</td>
<td>APT.</td>
</tr>
<tr>
<td>College of Agriculture</td>
<td>Agricultural Economics</td>
<td>MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Agricultural Engineering</td>
<td>MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Agricultural Extension</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Agricultural Mechanization</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Animal Science</td>
<td>MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Entomology and Plant Pathology</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Food Technology and Science</td>
<td>MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Forestry</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Ornamental Horticulture and Landscape Design</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Plant and Soil Science</td>
<td>MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Wildlife and Fisheries Science</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td>College of Business Administration</td>
<td>*Accounting</td>
<td>MAcc</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Business Administration</td>
<td>MBA, DBA</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Economics</td>
<td>MA, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Management Science</td>
<td>PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Statistics</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td>College of Communications</td>
<td>*Communications</td>
<td>MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td>College of Education</td>
<td>Adult Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Agricultural Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Art Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Business Education</td>
<td>MS, MACT</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>College Student Personnel</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Curriculum</td>
<td>MS, MD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Curriculum and Instruction</td>
<td>EdD, EdD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Distriutive Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Educational Administration</td>
<td>MS, EdD, EdD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>and Supervision</td>
<td>Educational Psychology and Guidance</td>
<td>EdD</td>
</tr>
<tr>
<td></td>
<td>*Elementary Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>English Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Foreign Language Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Guidance</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Health Education</td>
<td>EdD, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Industrial Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Instructional Media and Technology</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Mathematics Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Music Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Physical Education</td>
<td>MS, EdD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Public Health</td>
<td>MPH</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Reading Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Recreation</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Safety Education and Service</td>
<td>MS, EdS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>School Health Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Science Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Social Science Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Special Education</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Vocational Rehabilitation Counseling</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Vocational-technical Education</td>
<td>MS, EdS, EdD</td>
<td>X²</td>
</tr>
<tr>
<td>College of Engineering</td>
<td>*Aerospace Engineering</td>
<td>ME, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Chemical Engineering</td>
<td>ME, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Civil Engineering</td>
<td>ME, MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Electrical Engineering</td>
<td>ME, MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Engineering Science</td>
<td>MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Environmental Engineering</td>
<td>ME, MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Industrial Engineering</td>
<td>ME, MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Mechanical Engineering</td>
<td>ME, MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Metallurgical Engineering</td>
<td>MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Nuclear Engineering</td>
<td>ME, MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Polymer Engineering</td>
<td>MS, PhD</td>
<td>X²</td>
</tr>
<tr>
<td>College of Home Economics</td>
<td>Child and Family Studies</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Consumer Studies and Housing: Public Policy</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Food Science</td>
<td>MPH</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Food Systems Administration</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>Agricultural Mechanization</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Home Economics</td>
<td>PhD</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Interior Design and Housing</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Nutrition</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td></td>
<td>*Textiles and Clothing</td>
<td>MS</td>
<td>X²</td>
</tr>
<tr>
<td>MAJOR</td>
<td>DEGREE</td>
<td>ADMISSION TEST REQUIRED</td>
<td>ADDITIONAL REQUIREMENTS</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>--------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GRE</td>
<td>ADV.</td>
</tr>
<tr>
<td>Intercollegiate Aviation Systems*</td>
<td>MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Comparative and Experimental Medicine</td>
<td>MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Ecology</td>
<td>MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Industrial and Organizational Psychology</td>
<td>MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Life Sciences</td>
<td>MS, PhD</td>
<td>X</td>
<td>or X</td>
</tr>
<tr>
<td>*Management Science</td>
<td>MS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College of Liberal Arts Anthropology</td>
<td>MA, PhD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Art</td>
<td>MA, MFA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Audiology</td>
<td>MA</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Biochemistry</td>
<td>MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Botany</td>
<td>MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Chemistry</td>
<td>MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Computer Science</td>
<td>MACT, MA, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*English</td>
<td>MA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td>MS, PhD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Geology</td>
<td>MS, PhD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*German</td>
<td>MACT, MA</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>German Language and Literature</td>
<td>PhD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>MA, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>MM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Microbiology</td>
<td>MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Music</td>
<td>MM, MA</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td>MA, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Physics</td>
<td>MACT, MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Political Science</td>
<td>MA, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Psychology</td>
<td>MA, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Public Administration</td>
<td>MPA</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td>MA, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Spanish</td>
<td>MA, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Speech and Hearing Science</td>
<td>PhD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Speech Pathology</td>
<td>MA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speech and Theatre</td>
<td>MA</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>*Theatre</td>
<td>MFA</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Zoology</td>
<td>MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>College of Nursing Nursing</td>
<td>MSN</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>School of Biomedical Sciences Biomedical Sciences</td>
<td>MS, PhD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>School of Library and Information Science Library Science</td>
<td>MSLS</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>School of Planning Planning</td>
<td>MSP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School of Social Work Social Work (Knoxville, Memphis, Nashville)</td>
<td>MSSW, PhD</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

*Non-degree and provisional students must obtain permission from the department/program head in order to register for courses in these fields.*

1 American applicants only.
2 International applicants only.
3 EdSB applicants only.
4 EdB applicants only.
5 PhD applicants only.
6 Department doctoral option offered under the major of home economics.
7 Interdisciplinary option offered in each department.
8 Offered at UT Space Institute.
9 G.S. Rating Form submitted to Graduate Office.
10 G.S. Rating Form submitted to Department.
11 Forms obtained from & returned to Department.
12 For Financial Assistance only.
The Graduate School

L. Evans Roth, Vice Chancellor for Graduate Studies and Research
Clarence W. Minkel, Dean for Graduate Studies
Marla P. Peterson, Dean for Research
Thomas L. Bell, Assistant Dean for Research
Mary P. Richards, Associate Dean for Graduate Studies
Thomas H. Klinck, Assistant Dean for Graduate Studies

The University of Tennessee, Knoxville is the official land-grant institution for the State of Tennessee. It is a comprehensive institution offering a wide range of graduate programs leading to the Master's and doctoral degrees. The University offers Master's programs in 118 fields of specialization and doctoral work in 52. Approximately 6,000 graduate students are enrolled both on and off campus. Administration of graduate student policies and procedures, and associated record keeping, is the responsibility of the Dean for Graduate Studies. Much of the day-to-day administration of graduate study is conducted by department heads or faculty advisors and committees responsible for particular programs. In addition to departmental units, numerous interdisciplinary programs, institutes and centers have been developed on campus and in locations around the state. The Graduate School brings together faculty and graduate students as a community of scholars with a common interest in creative work and advanced study. Graduate programs are available to students desiring full-time work toward the Master's and doctoral degrees or professional certification, those interested in continuing education for updating and broadening knowledge, and those pursuing postdoctoral research. Traditionally, universities have provided graduate programs primarily for full-time, degree-oriented students. Serving the needs of students engaged full-time in intensive study and pursuit of a degree continues to be a major emphasis of UT's graduate effort. At the same time, the University employs a variety of modes, traditional and non-traditional, in offering quality programs designed to serve students.

The policies of The Graduate School are made by the Graduate Council, a body composed of elected representatives from each college, the School of Social Work, the Space Institute, the Graduate Student Council, and five members appointed by the Vice Chancellor for Graduate Studies and Research. Ex-officio members include the Vice Chancellor, the Dean for Graduate Studies, the Associate Dean for Graduate Studies, the Assistant Dean for Graduate Studies, and the Chair of the Research Council. The Graduate Office develops procedures to carry out the policies made by the Council, and has primary responsibility for Graduate School admissions and records. A graduate student must assume full responsibility for knowledge of rules and regulations of The Graduate School and departmental requirements for the chosen degree program. Individual colleges and departments may have requirements beyond the minimum established by The Graduate School. The Graduate School News, published quarterly, includes a calendar of deadlines, new policies and procedures of The Graduate School, and changes in degree programs. The News contains the latest information on Graduate School matters, some of which may supersede this catalog. Copies of the News are available at the Graduate Office. Changes in degree requirements for admission to The Graduate School, applicants at the doctoral level must demonstrate a potential for superior academic performance. To be considered are such criteria as performance in prior undergraduate and/or graduate studies, achievement on admission tests for graduate studies, letters of recommendation from professors familiar with the applicant's capabilities, and similar evidences of scholarly achievement.

Refer to pages 8-9 and to description of programs for specific requirements for admission. Non-Degree Admission: Applicants may apply for non-degree status who, for example:
1. do not desire to pursue a degree program;
2. have received an advanced degree;
3. need additional time to fulfill application requirements for a degree program.

Admission to a degree program requires a minimum grade point average of 2.5 out of a possible 4.0, or a 3.0 during the senior year. However, many departments require a higher average. A minimum B average is required for international students. In order to earn graduate credit, a student must be enrolled in one of the categories listed below. Course work taken in any other status is ineligible for graduate credit and cannot be changed to graduate credit.

In addition to meeting the minimum requirements for admission to The Graduate School, applicants at the doctoral level must have demonstrated a potential for superior academic performance. To be considered are such criteria as performance in prior undergraduate and/or graduate studies, achievement on admission tests for graduate studies, letters of recommendation from professors familiar with the applicant's capabilities, and similar evidences of scholarly achievement.

Admission to a Graduate School Degree Program: Admission to a degree program requires a minimum grade point average of 2.5 out of a possible 4.0, or a 3.0 during the senior year. However, many departments require a higher average. A minimum B average is required for international students.

In order to earn graduate credit, a student must be enrolled in one of the categories listed below. Course work taken in any other status is ineligible for graduate credit and cannot be changed to graduate credit.

In addition to meeting the minimum requirements for admission to The Graduate School, applicants at the doctoral level must have demonstrated a potential for superior academic performance. To be considered are such criteria as performance in prior undergraduate and/or graduate studies, achievement on admission tests for graduate studies, letters of recommendation from professors familiar with the applicant's capabilities, and similar evidences of scholarly achievement.

Refer to pages 8-9 and to description of programs for specific requirements for admission. Non-Degree Admission: Applicants may apply for non-degree status who, for example:
1. do not desire to pursue a degree program;
2. have received an advanced degree;
3. need additional time to fulfill application requirements for a degree program.

There is no specific limit on the number of courses that a student may take in non-degree status. However, within 18 hours of graduate course work in this status, the student must either:
1. apply and be admitted to a specific degree program (see Change of Program, p. 15, for instructions); or

Admission and Registration

Admission to The Graduate School requires a Bachelor's degree with a satisfactory grade point average from a college or university accredited by the appropriate regional accrediting agency. Admission to The Graduate School does not ensure acceptance into a specific degree program nor admission to candidacy for the degree desired. When a student is admitted to The Graduate School prior to having received the baccalaureate degree, that degree must be awarded prior to the dates of first registration in The Graduate School. If a student does not enroll within one year after the requested admission, he/she must repeat the application process.

Types of Admissions

Admission to a Graduate Degree Program: Admission to a degree program requires a minimum grade point average of 2.5 out of a possible 4.0, or a 3.0 during the senior year. However, many departments require a higher average. A minimum B average is required for international students.

In order to earn graduate credit, a student must be enrolled in one of the categories listed below. Course work taken in any other status is ineligible for graduate credit and cannot be changed to graduate credit.

In addition to meeting the minimum requirements for admission to The Graduate School, applicants at the doctoral level must have demonstrated a potential for superior academic performance. To be considered are such criteria as performance in prior undergraduate and/or graduate studies, achievement on admission tests for graduate studies, letters of recommendation from professors familiar with the applicant's capabilities, and similar evidences of scholarly achievement.

Refer to pages 8-9 and to description of programs for specific requirements for admission. Non-Degree Admission: Applicants may apply for non-degree status who, for example:
1. do not desire to pursue a degree program;
2. have received an advanced degree;
3. need additional time to fulfill application requirements for a degree program.

There is no specific limit on the number of courses that a student may take in non-degree status. However, within 18 hours of graduate course work in this status, the student must either:
1. apply and be admitted to a specific degree program (see Change of Program, p. 15, for instructions); or
programs. Applicants should contact the appropriate regional accrediting agency. The graduate application, $10 application fee, and proof of a Bachelor's degree from a regionally accredited institution are required for consideration as a non-degree student. The minimum requirements are a Bachelor's degree with a 2.5 grade point average on a 4.0 scale or a 3.0 the senior year from a college or university accredited by the appropriate regional accrediting agency.

A major area need not be declared, but some departments do not permit provisional students to register for graduate courses. Students who have previously attended are required for consideration as a non-degree student. The application fee is $10 application fee, and a Transient Student Graduate Application for Admission, the $10 application fee, and a Transient Student Certification 10 days prior to registration. Only one quarter, or a maximum of 12 hours, of course work can be taken in transient status. Necessary forms may be obtained from The Graduate Office.

Eligible Seniors: Subject to approval by The Graduate School, a senior at UTK who needs fewer than 45 quarter hours to complete the requirements for a Bachelor's degree and has at least a B average may apply for provisional admission within seven weeks after registration will NOT be permitted to register again UTK receive a copy of the transcripts showing the course work taken, until all admission requirements are met. An international student on a non-immigrant visa may not enroll in the status.

Admission of International Students: The Graduate School can accept only students who have outstanding records. An international student must have an equivalent 4-year Bachelor's degree with at least a 3.5 average on all previous college-level work and a B + on all previous graduate work. On various grading scales, this would indicate:

- a. 3.0 and 3.5 on a 4.0 scale;
- b. 14 and 15 on 20 point scale;
- c. 80.0 from Chinese institutions;
- d. 1st Class or Division from Indian institutions;
- e. Upper 2nd Class Honors on various British grading systems.

Another grading systems will be evaluated upon receipt of transcript. An international student may apply only for the summer or fall quarters. If a student is transferring into the University, receiving a degree from a U.S. or Canadian institution, an exception may be made to enter the winter or spring quarters. Requests must be made in writing by the student and endorsed by the UTK department admitting the student. The Graduate Office must be notified if a change in the admission date occurs.

Eligibility of Seniors: Subject to approval by the Graduate School, a senior at UTK who has not been approved initially or for transfer by the Immigration and Naturalization Services (INS) to attend UTK. An international student may not enroll as a provisional or non-degree student. All students whose native language is not English must pass an English proficiency examination after arrival at UTK. Refer to section on English Proficiency, page 15.

Transient Graduate Students: A student who has been enrolled in a graduate degree program at another institution and who wishes to take courses for transfer to that institution may be admitted after submitting a completed Graduate Application for Admission, the $10 application fee, and a Transient Student Certification 10 days prior to registration. Only one quarter, or a maximum of 12 hours, of course work can be taken in transient status. Necessary forms may be obtained from The Graduate Office.

Enrollment of Veterinary Medicine Students in Graduate Courses: A student in good standing at the College of Veterinary Medicine may enroll in UTK graduate courses, without being admitted to The Graduate School, under the following conditions:

1. The student's advisor must approve in advance the student's enrollment in each course.
2. The student may take a maximum of 15 quarter hours of graduate courses during the D.V.M. program.
3. Approval must be obtained each quarter at registration through the Graduate Office. The student's progress is subject to review and approval each quarter by the Associate Dean, College of Veterinary Medicine.

Admission of Faculty Members: Faculty members of UTK or the Institute of Agriculture at the rank of assistant professor or above, and employees of the administrative staff at UTK, the UT Central Administration, and the Institute of Agriculture will not normally be admitted to candidacy for a doctoral degree at UTK. Exceptions may be granted on an individual basis. Further information is provided in the Faculty Handbook. Possible conflict of interest will play a major factor considered in the review of any request.

Admission Procedures

Anyone with a Bachelor's degree from a regionally accredited institution wishing to take courses for graduate credit, whether or not he/she desires to become a candidate for a degree, must make formal application for admission to The Graduate School or apply for transient status. No action is taken until a file is complete. The applicant will be notified by mail of the action taken.

To apply for admission the following materials must be sent to The Graduate School:
1. The completed Graduate Application for Admission (inside front cover of Graduate Catalog).
2. A $10 application fee.
3. Two copies of official transcripts from all colleges and universities attended.
4. Reference letters or rating forms (pages 8-9). Forms obtained from the college or department should be returned to the same source.
5. Scores from examinations which may be required for admission.

Programs which require scores from the Graduate Record Examination or the Graduate Management Admission Test are shown on pages 8-9. The TOEFL is required of all students whose native language is not English, unless they have graduated from a regionally accredited U.S. institution. Application forms for the above tests can be obtained by writing:

Educational Testing Service
Princeton, NJ 08540

UTK is an approved testing center for all examinations. Examination results reach the University in approximately six weeks. All of the above documents become the property of the University and will not be returned.

Readmission
A student who has not attended The Graduate School at UTK for more than five quarters (including Summer Quarter) must apply for readmission. A readmission application should be submitted to the Graduate Office at least two weeks prior to the desired reentry date. A student who has attended another institution since enrollment at UTK must submit official transcripts showing all course work and any degrees earned at that institution. The student will be notified by The Graduate School when action has been taken. A student who is permitted to enroll and is subsequently denied readmission will receive credit for courses completed successfully. Future registration will not be allowed until readmission is granted.

Registration Procedures
Dates of registration are listed in the University Calendar (front of Catalog). To register, students should:
1. Report to the Graduate Office to obtain registration materials (scan form and Timetable of Classes).
2. Confer with an advisor assigned by the department to obtain approval of a schedule of courses and to have the scan form signed.
3. Return scan form to the Graduate Office or alternate location designated in Timetable.
4. Consult Timetable to complete registration.

Non-degree or provisional students in unrestricted programs (see pages 8-9) may obtain permission to register from the Graduate Office.

A preregistration period is scheduled each quarter for a subsequent quarter (see University Calendar). Any graduate student who has applied for admission can preregister. Information can be obtained from the Graduate Office. A student who participates in preregistration should obtain the computerized class schedule and pay fees on the first day of registration.

Planning to preregister should obtain the Graduate Office. A student who has applied for admission can preregister. Information can be obtained from the Graduate Office. A student who participates in preregistration should obtain the computerized class schedule and pay fees on the first day of registration.

Failure to pay tuition and fees before the deadline listed each quarter in the Timetable of Classes will result in the assessment of a late registration fee. Retroactive registration is not permitted.

Family Educational Rights and Privacy Act
This act provides for confidentiality of student records; however, it also provides for basic identification of persons at UTK without the consent of the individual. Release of information to third parties includes directory information such as contained in the campus telephone book and sports brochures. Such information may include name, address, telephone number, date and place of birth, major, dates of attendance, degree and awards, the most recent previous educational agency or institution attended, participation in school activities and sports, and weight and height (for special activities).

Notice of the categories to be contained in a publication ofDirectory of Classes. A period of one week is provided during which a student may request that such information not be released.

Student Identification Number
UTK requires assignment of an individual student number for internal identification of each student’s record. The University began using the social security number as the student identification number prior to January 1, 1975; therefore, the federal law allows continued use of this number. However, if a student does not desire the social security number to be used, notification to the University must be made at the time of application for admission; a student identification number will be assigned instead. For prompt and accurate retrieval of records and for conducting business about their own records, students and alumni must give their student identification number. Student identification numbers, whether a social security number or an assigned number, are used administratively within the University only and are not given to third parties without expressed consent of the student.

Fees, Residency Classification, and Financial Aid

University Fees
University fees are determined by the Board of Trustees and are subject to change without notice. The general fees in effect for graduate students are as follows:

<table>
<thead>
<tr>
<th>COURSE LOAD</th>
<th>FEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-8 hours</td>
<td>$102 per quarter</td>
</tr>
<tr>
<td>9 hours or more</td>
<td>$132 per quarter</td>
</tr>
<tr>
<td>Master's degree candidates</td>
<td>$16 per quarter</td>
</tr>
<tr>
<td>Doctoral degree candidates</td>
<td>$46 per quarter</td>
</tr>
</tbody>
</table>

NOTE: In lieu of the above charge for tuition and/or maintenance fee, part-time students may elect to pay fees computed by the quarter hour credit (or audit) as follows:

<table>
<thead>
<tr>
<th>COURSE LOAD</th>
<th>FEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-8 hours</td>
<td>$44 per quarter</td>
</tr>
<tr>
<td>9 hours or more</td>
<td>$132 per quarter</td>
</tr>
<tr>
<td>Master's degree candidates</td>
<td>$16 per quarter</td>
</tr>
<tr>
<td>Doctoral degree candidates</td>
<td>$46 per quarter</td>
</tr>
</tbody>
</table>

University Programs and Services Fee:
The fee for the summer quarter is $35. Part-time students taking fewer than 9 quarter hours will be assessed at the rate of $3 per quarter hour or fraction thereof; minimum charge $9. Graduate and teaching assistants, as well as fellowship students who may have waiver of fees (tuition and/or maintenance), must pay the appropriate University Programs and Services Fee.

Knoxville campus students taking a course load of 6-8 hours may elect to pay the full programs and services fee.

Knoxville campus day students taking a course load of 3-8 hours may elect to pay the $13 student health fee plus the appropriate part-time programs and services fee. The student health fee is included in the full $46 programs and services fee. This fee is not refundable.

Late Registration Fee:
All students are required to have a validated receipt for complete the registration procedure. This includes students whose fees are billed, prepaid, or waived. Students who do not complete registration on the regular dates scheduled for this purpose will be charged a late registration fee of $2 up to $55. See the University General Catalog for application of this fee. Doctoral students who must register retroactively for dissertation credit will be charged a late fee of $35 for each quarter of retroactive registration. The payment of fees with a check which is not honored by the bank will incur a service charge of $10 to $45, depending on the date the check is redeemed.

Music Fee:
One-half-hour lesson per week, per quarter $20
One-hour lesson per week, per quarter $40

Payable at registration by students receiving individual instruction in music.

Graduate Fee:
Master's degree candidates $16
Doctoral degree candidates $46

There is no additional charge for diploma binding, or microfilming. The graduation fee is non-refundable and is valid for three quarters after the quarter in which it is paid.

Deferred Payment Service Fee:
$5
This fee is applicable when the payment of
any part of a student's account is deferred, including accounts which must be billed to other agencies, auxiliary services, and institutions. This fee is also applicable when any additional charge (out-of-state tuition, music fee, room and board adjustment) is not paid within five regular business days after the date due for such charges.

It is the student's responsibility to take the initiative to pay all University obligations promptly.

FEES FOR COURSES NOT TAKEN FOR CREDIT:
Fees for courses audited are the same as for courses taken for credit. For fee purposes, courses listed for 0 credit hours are considered as one-hour courses.

REFUND OF FEES FOR WITHDRAWAL:
Withdrawal from school for the quarter after receiving a schedule must be by official notification to the Withdrawal Office, Student Counseling Services Center, 900 Volunteer Blvd., whether or not fees have been paid, classes have been attended, or the schedule is incomplete. Failure to attend class does not automatically withdraw or drop a student from school.

The effective date of withdrawal is the date the Withdrawal Office is notified by completion of the official withdrawal request form. The appropriate percentage of fees will be charged unless this is completed by the close of the last day designated for regular registration and before the first official day of classes for the quarter. Failure to notify the Withdrawal Office promptly when withdrawing could result in a higher charge assessment. If a course on a student's schedule is officially dropped and before the first official day of classes, a 40 percent charge is made for courses dropped after 21 days following regular registration. A 40 percent charge is made for courses dropped between 6 and 14 calendar days following regular registration permits a 70 percent fee refund. Withdrawal between 15 and 21 calendar days following regular registration permits a 50 percent fee refund. Withdrawal between 15 and 21 calendar days following regular registration permits a 50 percent fee refund. Withdrawal between 22 and 28 calendar days following regular registration permits a 30 percent fee refund. The above withdrawal refund policy does not apply to the off-campus Graduate Centers. Refunds, in accordance with the withdrawal refund policy, will be made after the drop deadline.

Refunds, in accordance with the withdrawal refund policy, will be made after the drop deadline. Part-time students may pay fees computed at the appropriate quarter-hour rate as indicated above. No charge is made for courses dropped during the first 5 calendar days following regular registration. A 40 percent charge is made for courses dropped between 6 and 21 calendar days following regular registration, and a 100 percent charge is made for courses dropped after 21 days. Students who drop courses are eligible for a refund only if the sum of the charges computed at the quarter-hour rate for the hours continued plus the percentage assessed for the hours dropped results in an amount less than that paid. A course on a student's schedule is officially dropped and becomes effective on the date that the charge of registration form is processed on a drop/add terminal from school of class. A refund due for dropped courses will be made after the final audit at the end of the quarter. Rental charges and adjustments will be determined by the Office of Residence Halls in accordance with the terms of the housing agreement contract.

SUMMER QUARTER FEES AND EXPENSES:
Fees and expenses for the summer quarter are the same as for the other quarters during the academic year with the exception of the University programs and services fee as noted above.

Although the summer quarter is divided into terms of varying lengths, tuition and fees are assessed at the regular quarter-hour rate up to the maximum charge for a complete regular quarter.

The refund policy covering withdrawals and dropped courses for the summer quarter is based on the length of the term for the course(s) dropped. No refund is applicable to term courses dropped later than 14 calendar days after the regular registration day for the course(s) involved.

WAIVER OF FEES:
Graduate assistants, teaching assistants, and others whose fees are billed, prepaid, waived must take a fee waiver on a form available from the Bursar's Office, where they should have their fee receipts validated and supply necessary details concerning fee payment waiver.

NOTE: All fees are subject to change.
All charges and refunds will be made to the nearest even dollar. All charges are subject to subsequent audit and verification. The University reserves the right to correct any errors in fee or rental payments by appropriate additional charges or refund. Other information on fees, expenses, refunds, and adjustments is given in the Timetable (schedule of classes) for each quarter.

The University is authorized by statute to withhold diplomas, grades, transcripts, and registration privileges until student debts and obligations (other than Student Loan Fund notes) owed to the University are satisfied.

Residency Classification for Tuition Purposes
When a prospective student applies to The Graduate School, he/she is notified of residency classification (in-state or out-of-state) for tuition purposes. Classification is based on information supplied in the Graduate Application for Admission. A student does not acquire in-state residency status while enrolled full-time at a higher educational institution in Tennessee. Proof of in-state residence is the responsibility of the individual.

A student who is classified out-of-state and (1) resides in Tennessee, (2) works full-time in the state at or from Fort Campbell, Kentucky, and (3) desires to be assessed tuition on a part-time basis (maximum 6 hours of course work per quarter), is eligible for a waiver of out-of-state tuition. The student must apply for the waiver prior to the date of registration each quarter. Forms are available from the Residency Clerk at the Graduate Office.

A student wishing to appeal a residency classification should contact the Residency Clerk in the Graduate Office, who will provide an application for reclassification and a copy of the State regulations. The application should be submitted on or before the last day of registration for a given quarter, if the student is to be considered for reclassification that quarter.

Academic Common Market
The Academic Common Market is an interstate agreement among Southern states for sharing unique programs. Participating states are able to make arrangements for their residents who qualify for admission to enroll in specific programs at UTK on an in-state tuition basis, where these programs are not available in the state of residence.

Cooperating states in the Academic Common Market are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, South Carolina, Tennessee, Texas, Virginia and West Virginia. Twenty doctoral, one Specialist in Education, and sixteen Master’s programs at UTK are approved by the Academic Common Market for residents of these various states to enroll at in-state tuition rates.

Residents of one of the member states who wish to enroll at the University and have further information should contact the Academic Common Market at the Graduate Office or the Southern Regional Educational Board, 130 Sixth Street, N.W., Atlanta, GA 30313.

Financial Aid
UTK offers several types of financial assistance for which graduate students can apply.

Assistantships and Fellowships: Graduate assistantships, scholarships, and traineeships are offered through many departments. Information concerning these types of assistance can be obtained from the department in which the student plans to study.

The Hilton A. Smith Graduate Fellowships for full-time study at UTK are awarded on the basis of scholarly performance as evidenced by grades and faculty recommendations. Candidates from any field of study are invited to apply if they have a 3.4 grade point average or above in all previous academic work. The fellowships include tuition, fees, and maintenance fees. Application packets are available from the Graduate Office after November. Completed applications, including all supporting materials, must be submitted to the Assistant Director of Graduate Admissions by February 15. Offers of awards will be announced by March 15.

Employment: Three sources of student employment are coordinated by the Office of Scholarships and Financial Aid. (1) The federally-sponsored College Work-Study Program provides part-time jobs for students having demonstrated financial need by the Federal Financial Aid Form. This listing of part-time jobs is provided by the Financial Aid Office. (2) Job Location and Development Office lists off-campus, part-time, and full-time job opportunities with agencies and companies throughout the Knoxville area. (3) On-campus, part-time job opportunities are listed by the Student Employment Service. This listing of part-time jobs is based upon requests from off-campus agencies. Referrals are made in accordance with a student's skills and interests regardless of financial need.

Students needing either part-time or
Explaination of Course Listings

Each course listing in the Graduate Catalog contains information in an abbreviated form. The course number indicates the level at which the course is taught. All 5000-6000 level courses are graduate courses. The 3000-4000 level courses are upper division courses available for graduate credit if listed in the Graduate Catalog, unless noted otherwise. To receive graduate credit for these, a student must so indicate on the registration material.

The official course title appears in bold-faced type following the course number. Numbers in parentheses following the course title indicate the quarter hours credit. If the credit is variable, to be determined in consultation with the instructor, the minimum and maximum are shown (e.g. 2-3). The credit hours are followed by a course description indicating the content to be covered.

Some courses may be repeated for a maximum number of hours allowable toward a degree program. This number is stated for each repeatable course with the exception of Thesis 5000 and Dissertation 6000. Courses may be cross-listed with two or more departments, an arrangement that is indicated by a parenthetical statement: (Same as Psychology 5432). The course description is given only under the primary department.

"S/NC only" indicates that the course may be taken only for Satisfactory/No Credit grading. Refer to section on Grading System. At the discretion of the instructor, a course may be taken only for credit to audit after the first five days of classes.

Course registration may not be changed from credit to audit after the first five days of classes.

Change of Registration

The permanent record will show all courses for which the student has registered except those audited and those from which he/she has withdrawn during the first five consecutive instructional days after the beginning of classes.

Students who fail to attend the first class meeting without prior arrangement with the department may be dropped from the course to make their spaces available to other students. Students have the responsibility to assure that they have been dropped. Otherwise they may receive a grade of F in the course.

The deadline for change of registration (e.g. from graduate to undergraduate, undergraduate to graduate, withdrawal) is set at mid-term, approximately 35 calendar days after the first day of classes each quarter. A student may change registration for a course at any time prior to and including this date by executing a change of registration form and submitting it to the Graduate Office. The signature of the appropriate department head is required on the form for all changes. The instructor's signature is required if the course is closed and/or after the first two weeks of classes. If the student withdraws from a course or from the University after the first five days of classes and before the change of registration deadline, he/she will receive a grade of W on the permanent record.

Course registration may not be changed from credit to audit after the first five days of classes.

After the change of registration deadline, a student withdrawing from a course or from the University will receive a grade of F unless the student can demonstrate that the request for withdrawal is based on circumstances beyond the student's control. In the latter case, a grade of W will be entered on the permanent record.

To change registration in any way after the deadline, a student must present the request, together with documentary evidence of extenuating circumstances, to the Graduate Office. In addition, the student must complete a change of registration form and questionnaire signed by the instructor(s) and advisor as evidence of their knowledge of the request. The request is approved, the Graduate Office will notify the Office of Admissions and Records to enter the change on the student's permanent record.

Grading System

An average of B (3.0) on course work taken at UTK is required to receive any graduate degree from the University. Grades in The Graduate School have the following meanings:

- A (4 quality points per quarter hour), superior performance.
- B+ (3.5 quality points per quarter hour), better than satisfactory performance.
- B (3 quality points per quarter hour), satisfactory performance.
- C+ (2.5 quality points per quarter hour), less than satisfactory performance.
- C (2 quality points per quarter hour), performance well below the standard expected of graduate students.
- D (1 quality point per quarter hour), clearly unsatisfactory performance and
cannot be used to satisfy degree requirements.

F (no quality points), extremely unsatisfactory performance and cannot be used to satisfy degree requirements.

I (no quality points), a temporary grade indicating that the student has performed satisfactorily in the course, but due to unforeseen circumstances, has been unable to finish all required work. An I is not given to enable a student to do additional work to raise a deficient grade. All incomplete must be removed within two quarters, excluding the summer quarter. If a complementary grade report has not been received in the Graduate Office at the end of the second quarter, the I will be changed to an F. The course will not be counted in the cumulative grade average until a final grade is assigned. No student may graduate with an I on the record.

S/NC (carries credit hours, but no quality points), S is equivalent to a grade of B or better, and NC means no credit earned. Courses where NC is received may be repeated for a grade of S. S/NC grading is allowed only where indicated in the course description in the Graduate Catalog. The number of S/NC courses in a student's program is limited to one-fourth of the total credit hours required.

P/NC (carries credit hours, but no quality points), P indicates progress toward completion of a thesis or dissertation. NP indicates no progress.

W (carries no credit hours or quality points), a temporary grade indicating that the student has been unable to finish all required work. A W will be recorded on the transcript. Below 2.0, an NC will be recorded and the course cannot be used toward meeting degree requirements. Grades for law courses will not be reflected in the cumulative grade-point average.

Law Courses

Law courses are not available for graduate credit. However, a graduate student may take up to 6 semester hours of law courses and apply them toward a degree, upon approval of the College of Law and the student's major professor. The graduate student must register for law courses during the registration period at the College of Law and request an S/NC grade. If the student earns a 2.0 or better, an S will be recorded on the transcript. Below 2.0, an NC will be recorded and the course cannot be used toward meeting degree requirements. Grades for law courses will not be reflected in the cumulative grade-point average.

Different rules apply to students enrolled in the Dual J.D.-MBA program. Grades must be earned according to the grading system of the respective colleges, e.g., numerical grades for law courses, letter grades for graduate courses. Refer to p. 35 for the grades acceptable to meet degree requirements. Only one cumulative GPA (law or graduate) will be carried on the student’s transcript until graduation, at which time both the graduate and law cumulative will be added to the permanent record. A student enrolled in the DBA program may use 8 semester hours or more of law courses for the supporting area under the arrangement described on p. 35.

Auditors and Audited Courses

Persons who wish to attend certain classes regularly, without taking examinations or receiving grades or credit, may do so by completing a graduate application, paying the application fee as auditors, and paying regular fees. Graduate students paying regular fees are entitled to attend classes. The names of all auditors properly registered will appear on the intermediate class rolls, but will be removed from the final course roll. No record of audited coursework will appear on the permanent record.

Correspondence Study

No graduate credit is accepted at UTK for work done by correspondence study at any university.

Transfer Credits

Official transcripts must be sent directly to the Graduate Office from all institutions previously attended before any transfer of credit will be considered. To be transferred into a graduate program at UTK, a course must:
1. be taken for graduate credit;
2. carry a grade of B or better;
3. be a part of a graduate program in which the student had a B average;
4. not have been used for a previous degree; and
5. be approved by the student's graduate committee and the Vice Chancellor for Graduate Studies and Research on the Admission to Candidacy form.

Courses transferred into any graduate program will not affect the minimum residence requirements for the program, nor will they be counted in determining the student's grade point average. Credits transferred cannot be used to meet the 5000- or 6000-level course work requirements. Credit for extension courses taken from other institutions is not transferable, nor is credit for any course taken at an unaccredited and/or foreign institution.

Master's degree: A maximum of 9 quarter hours (or 6 semester hours) from institutions outside The University of Tennessee system may be transferred into a student's Master's program. In addition, the student may transfer courses taken at other campuses of The University of Tennessee. The total transfer work accepted may not exceed one-half of the student’s full program of course work. Transferred courses must have been completed within the six-year period prior to registration. They will be placed on the student's UTK transcript only after admission to candidacy.

Ed.S. degree: A maximum of 9 quarter hours of course work beyond the Master's degree may be transferred into an Ed.S. program. Transferred courses in the last 45 hours taken for the degree must have been completed within the six-year period prior to the receipt of the degree. They will be placed on the student's UTK transcript only after admission to candidacy.

Doctoral degree: The number of hours the student may transfer into a doctoral program will be determined by the student's doctoral committee. Although the courses transferred may be used as part of the requirements toward the degree, they will not be placed on the student's UTK transcript.

Change of Program

A student who wishes to change a major program of study must complete a Request for Change of Graduate Program form which can be obtained from the Graduate Office. The form requires the signature of the head of the department in which admission was previously granted. No signature is needed if a student requests to change from non-degree or provisional status to a degree program, or from one degree to another within the same department. Acceptance into a new degree program is contingent upon review and approval by that department. If the student is not accepted into the program requested, he/she remains in the former department/program. The results of each
Further appeal may be made to the Dean for Graduate Studies, the Vice Chancellor for Graduate Studies and Research, the Graduate Council, and the Chancellor. The By-Laws of the University (Article V, section 7) provide that any individual ultimately appealing to the Board of Trustees, through the President. A copy of the Appeals Procedure is available in the Graduate Office.

Facilities and Services

Housing

Single Men and Women: Single graduate students are provided accommodations in facilities conducive to academic achievement and personal development. Single graduate students have the same priority as other single students and may be assigned to any residence hall. Graduate students have preferred to the accommodations offered in Melrose Hall and the Apartment Residence Halls. Melrose Hall offers community living units for groups of six to ten students with personal responsibility emphasized. The Holt Avenue Apartment Residence Hall accommodates students in groups of four. It is the responsibility of each resident to maintain the apartment to University standards. Further information can be obtained from the Office of Residence Halls, 605 Student Services Building.

A limited number of assistant head resident positions are available for single graduate students. The assistant head resident assists the head resident in coordinating and supervising operation of the hall. This is a live-in position with part-time responsibilities on a nine-and-a-half month appointment. Further information can be obtained from the Office of Residence Halls, 405 Student Services Building.

Married Students: The University provides excellent apartment facilities in several locations for married students. Information and application for these facilities may be secured from the Office of Rental Properties, Stadium Hall.

Off-Campus Housing: Information and assistance in locating off-campus housing are available in the Off-Campus Housing Office, 336 University Center.

Vehicle Operation And Parking

The University of Tennessee endeavors to provide adequate facilities for vehicles operated by students and staff. However, areas available for parking are necessarily limited. To reduce traffic congestion within the campus area, large student parking areas are located on the perimeter of the campus. Presently, FREE bus service is provided from the Main Campus to the Agricultural Campus. Also, bus service is provided to Married Student Housing Units at a nominal fee.

Each person who operates a motor vehicle in connection with attendance or employment at the University must register that vehicle with the Traffic section of the Security Department. A University Traffic and Parking Authority determines the parking policy, traffic regulations, and fees. This information is published each year in the "University Traffic and Parking Regulations" and is available at registration, at the Security Building, 1115 UT Drive, and at the Campus Information Center at Circle Park.

Services to the Physically Disabled

Services for students with physical disabilities, whether permanent or temporary, are coordinated by the Office of the Dean of Admissions and Records, 305 Student Services Building. In conjunction with the Physical Plant Office, the Student Activities Office, and academic departments, the office seeks to ensure that attendance at UTK is as convenient as possible for students with physical disabilities.

These services include assistance during registration (preregistration, collection of class schedules, payment of fees, drop and add); the securing of special parking permits, elevator keys, tickets for special events; and similar efforts to alleviate special mobility problems of the students. The Physical Plant Office coordinates efforts to eliminate physical barriers to the extent possible, with priority being given to access and facilities for academic buildings.

The Office of the Dean of Admissions and Records assists students in the scheduling of special class sections in order to respond to the particular needs of the physically handicapped.

The Office of Handicapped Student Services, 900 Volunteer Boulevard (Ground Floor—Student Counseling Center Building) offers academic support services and functions in an advocacy capacity for disabled students. The services include interpreters for hearing impaired students and readers for sight and other print impaired persons. Also, the office assists with course work recordings, Braille textbooks. As the needs of disabled students vary, the office seeks to individualize assistance to accommodate them. Further information is available in the Handicapped Student Services brochure and directory.

The University Library

The University of Tennessee, Knoxville Library owns approximately 1,400,000 volumes, more than 2,000,000 manuscripts, 58,000 microfilm reels and 1,200,000 items of other microtext, plus recordings, tapes, United States and United Nations documents, and more than 20,000 periodicals and other serial titles, which are received annually. The library's membership in the Association of Research Libraries reflects the University's emphasis on research and graduate instruction at the doctoral level and the support of large, comprehensive collections of library materials on a permanent basis.

Library holdings at Knoxville are housed in the James D. Hoskins (Main) Library and its three branches: Agriculture-Veterinary Medicine, Music, and the John C. Hodges Undergraduate Library.

The Special Collections section in the Main Library is a repository of regional and local materials, Tennessean, and other specialities, including legislative papers and mementoes of many Tennessee political
figures. The Radiation Biology Archives comprises the files of a group of internationally renowned scientists. Special Collections materials are of particular interest to scholars in the fields of history, political science, social sciences, biological sciences, and the arts. Library research holdings for faculty and graduate students are augmented by the Reference Department and by Interlibrary Services. Reference services access to bibliographic services offered by other institutions, such as computer-based data services and information retrieval, while Interlibrary Services borrows monographs and other copies of material. The Law Library on the Knoxville campus and the libraries located on the campuses in Chattanooga, Martin, Memphis, and Tullahoma are individually administered; each library of The University of Tennessee is accessible to all students and faculty in the system.

**Computing Center**

The University of Tennessee Computing Center (UTCC) provides computing facilities and services for the University's teaching, research, public service, and administrative activities. UTCC maintains close contact with the UT academic community by supporting research and instructional users with professional computer staff.

UTCC is principally located in the Stokely Management Center and in Andy Holt Tower. From the Stokely location, UTCC supplies computing services to all campuses in the UT System through job entry facilities located on each campus. At UTK, UTCC maintains seven job entry stations for batch work and nine sites for interactive computer work. UTCC maintains a graphics center with ten Tektronix graphics terminals, five storage and five refresh, two digitizing tablets, and a graphics plotter. Another digitizing tablet, plotter, and storage terminal are available at SMC M-1. UTCC also provides data entry services with two Enterex 600/50 key-to-disk systems.

UTCC's computers at Stokely Management Center which include two IBM 370/3031s, an IBM 4341/2, a DECsystem-10 with dual KL10 processors and a symmetrical multi-processor (SMP) configuration, and a DEC PDP 11/55 are used in research, instruction and administrative work. UTCC also has an IBM 360/40 used exclusively for administrative work. A Calcomp 1051 plotter is used to produce graphics output from jobs run on the IBM and DEC computers at SMC. Each IBM 370/3031 has six million bytes of memory, the IBM 4341/2 has eight million bytes of memory, and the DECsystem-10 has 1624K words of memory. The DEC PDP 11/55 is used to support the WIDJET job submission and retrieval system.

The IBM 370/3031s run under SVS with HASP II. The DECsystem-10 runs under TOPS-10. Time sharing features include VM/CMS and Coursewriter III on the 370/3031s, and APL, FORTRAN, BASIC, COBOL, MACRO, and other special-purpose application programs including extensive graphics software support, on the DECsystem-10.

UTCC publishes a User's Guide which describes the use of the IBM 370/3031s and the DECsystem-10 User's Guide which describes the use of the DECsystem-10. The guides are available at the UT Book Supply Store. UTCC also publishes a monthly Newsletter which announces systems, equipment and procedural changes and contains other items of interest to users. Program writeups and special user's guides are also available.

UTCC periodically offers intensive training seminars of several days duration in computer utilization on the IBM 370/3031s and the DECsystem-10. These seminars are primarily for faculty, staff and graduate students who use or plan to use UTCC facilities. UTCC offers non-credit short courses each quarter in topics such as programming languages and special purpose programs. These courses are announced in the UTCC Newsletter, the "Campus Capsule" section of the UT Daily Beacon, and "this week on campus", a publication announcing campus events.

Computing services can be requested via the request for services form available from the receptionist, 200 Stokely Management Center. All users of UTCC facilities are assigned a consultant to provide user assistance.

**Office of International Student Affairs**

This office, located at 201 Alumni Hall, assists students from other countries with the many matters that are of particular concern during their stay at UTK. International Student Affairs serves as the official University representative in all matters involving immigration authorities, international educational organizations, and foreign governments.

The office maintains the student's official immigration records and handles questions regarding immigration regulations. It coordinates such projects as a community volunteer program for international students, a Friendship Family program, and activities for student spouses. To aid the international student's understanding of American life, the office staff serves as advisors on personal and related problems. Orientation programs are held at the beginning of each term, and International students are urged to attend them.

The International House is located near the campus, at 1601 West Clinic Avenue. Provided by UT and operated by the staff of the Office of International Student Affairs, the House is a social and recreational center where domestic and international students meet to relax and discuss matters of mutual interest. The small library at "I" House contains books and periodicals from all over the world. This University facility is open during vacation periods. International students applying for admission should write to The Graduate School.

**Ombudsman Office**

Personnel of the Ombudsman Office in the University Center assist students in the resolution of problems encountered with any aspect of the University. The office is open during the regular working day and students are welcome to drop in at their convenience. Problems are treated confidentially and are dealt with expeditiously. The office does not replace existing structures but helps to ensure their responsiveness to student needs.

**Graduate Research Centers and Institutes**

**Energy, Environment, and Resources Center**

Director: E. Lumadelle, Sc.D. New Mexico State.
Associate Directors: R. A. Bohm, Ph.D. Washington; L. A. Clnard, Ph.D. Tennessee.

The Energy, Environment, and Resources Center was created to encourage interdisciplinary studies at UTK, directed at solutions to problems related to energy and the environment. The Center provides assistance to faculty interested in developing research and public service projects, manages research and development projects that involve several disciplines, and assists Tennessee government and industry in specific problems related to energy and environment. It also participates in the Statewide Consumer Education Program, especially in developing materials for the program.

Current research includes environmental and human costs of coal production, utilization of energy, solar energy, energy conservation in buildings and industry, regional solid waste management, resource recovery, and energy education and information.

**Transportation Center**

Director: K. W. Heathington, Ph.D., Northwestern, P.E.
Associate Directors: M. S. Bronzini, Ph.D. Pennsylvania State, P.E.; D. P. Middendorf, Ph.D. Tennessee.
Assistant Director: D. H. Jones, M.S. Tennessee.

The Transportation Center, utilizing an interdisciplinary approach to transportation research, brings together both University faculty and students in a setting conducive to the solution of problems associated with the transportation of goods and people. The Center provides support for undergraduate and graduate students, as well as faculty, in projects associated with research in the field of transportation. Such support, while providing needed financial assistance to students, enables the Transportation Center to undertake research that ultimately leads to the solution of the nation's transportation problems.

The Center's contribution to the field and its success in meeting the challenges of contemporary transportation research is predicated on the philosophy that education
The University of Tennessee Space Institute
Kanneth E. Harwell, Dean, Ph.D. California Institute of Technology
A. A. Mason, Associate Dean, Ph.D. Tennessee

The Space Institute is an interdisciplinary institute of graduate study and research offering the Master's and Ph.D. degrees in selected areas of engineering and the aerospace and physical sciences. The Institute occupies a 365-acre lakeshore campus near Tullahoma, Tennessee, conducive to the concentrated effort needed in advanced studies. Graduate degree programs are available with majors in Aerospace Engineering, Aviation Systems, Computer Science, Mathematics, Mechanical Engineering, Metallurgical Engineering, and Physics. In addition to the fundamental studies characteristic of each discipline, research opportunities are available in many aspects of atmospheric and space flight such as aerodynamics, atmospheric engineering, propulsion, flight performance, materials and structures, gas diagnostics including spectroscopic and electro-optic techniques, thermal sciences, energy conversion, remote sensing, computational fluid dynamics, microprocessors, and computer graphics. The Institute was established in part to increase the technological resources of Tennessee through education and practice in relevant scientific and technical areas and in part to interface University faculty and student research with the Air Force Arnold Engineering Development Center.

The faculty, research activities, and facilities of the Institute and those available at Arnold Center through appropriate contractual arrangements provide students an unusual opportunity for significant research in these areas. Students who enroll at UTSI are admitted to The Graduate School of UTK in courses numbered at or above the 5000 level. Only 9 thesis hours can be counted toward this requirement.

Water Resources Research Center
W. F. Brandes, Director, M.S. Illinois, P.E.

The Water Resources Research Center is a federally-designated institute for the conduct of water research for the state. The purposes of the Center are: (1) to assist and support all the academic institutions of the state, public and private, in pursuing water resources research programs needed by the state; (2) to provide information, dissemination and technology transfer services to state and local government bodies, academic institutions, professional groups, environmental organizations, and others, including the general public, who have an interest in water resources matters; (3) to promote educational in fields relating to water resources and to encourage the entry of promising students into careers in these fields.

Off-campus
Graduate Centers

Kingsport University Center: UTK offers at Kingsport resident graduate programs in science and engineering at both the Master's and doctoral levels. The program is operated within the policies set by the Graduate Council of UTK and is coordinated with the graduate and undergraduate offerings of East Tennessee State University.

Students who enroll in this program must be admitted to The Graduate School of UTK. Information and application forms may be obtained from Marvin K. Goodman, Director, Kingsport University Center, The University of Tennessee, University Boulevard, Kingsport, Tennessee 37660.

Oak Ridge Resident Graduate Program: UTK offers graduate study programs at Oak Ridge, with Master's and doctoral degrees in Business Administration with a concentration in management, Industrial Education, and Statistics; the Master's and doctoral degrees are available in engineering, mathematics, and physical and biological sciences. Courses are given in the late afternoons, evenings, and Saturdays, with research facilities provided by and used in cooperation with the Oak Ridge Associated Universities (ORAU) and the Union Carbide Corporation, Nuclear Division.

This program is supported under a subcontract with ORAU with principal support coming from the Nuclear Division. UT is one of the forty-three colleges and universities which sponsor ORAU, a nonprofit education and research management corporation.

Information and applications to the Graduate School may be obtained by writing to Director, UT-Oak Ridge Graduate School, Post Office Box 117, Oak Ridge, Tennessee 37830.

Nashville Graduate Engineering Program: Opportunities for graduate study leading to the degree of Master of Science in Industrial Engineering and other disciplines, as the need and resources permit, are offered by UTK.

Students who enroll in these programs must be admitted to The Graduate School of UTK. Information and appropriate forms may be obtained from Jerry Westbrook, Director, Chattanooga Graduate Education, Tenth and Charlotte, Nashville, Tennessee 37203.

Chattanooga Graduate Education Program: UTK offers a graduate program in education leading to the Specialist in Education and the Doctor of Education degrees with a major in Educational Administration and Supervision. Students who enroll in this program must be admitted to The Graduate School of UTK.

Graduate Centers

Kingsport University Center: UTK offers at Kingsport resident graduate programs in science and engineering at both the Master's and doctoral levels. The program is operated within the policies set by the Graduate Council of UTK and is coordinated with the graduate and undergraduate offerings of East Tennessee State University.

Students who enroll in this program must be admitted to The Graduate School of UTK. Information and application forms may be obtained from Marvin K. Goodman, Director, Kingsport University Center, The University of Tennessee, University Boulevard, Kingsport, Tennessee 37660.

Oak Ridge Resident Graduate Program: UTK offers graduate study programs at Oak Ridge, with Master's and doctoral degrees in Business Administration with a concentration in management, Industrial Education, and Statistics; the Master's and doctoral degrees are available in engineering, mathematics, and physical and biological sciences. Courses are given in the late afternoons, evenings, and Saturdays, with research facilities provided by and used in cooperation with the Oak Ridge Associated Universities (ORAU) and the Union Carbide Corporation, Nuclear Division.

This program is supported under a subcontract with ORAU with principal support coming from the Nuclear Division. UT is one of the forty-three colleges and universities which sponsor ORAU, a nonprofit education and research management corporation.

Information and applications to the Graduate School may be obtained by writing to Director, UT-Oak Ridge Graduate School, Post Office Box 117, Oak Ridge, Tennessee 37830.

Nashville Graduate Engineering Program: Opportunities for graduate study leading to the degree of Master of Science in Industrial Engineering and other disciplines, as the need and resources permit, are offered by UTK.

Students who enroll in these programs must be admitted to The Graduate School of UTK. Information and appropriate forms may be obtained from Jerry Westbrook, Director, Chattanooga Graduate Education, Tenth and Charlotte, Nashville, Tennessee 37203.

Chattanooga Graduate Education Program: UTK offers a graduate program in education leading to the Specialist in Education and the Doctor of Education degrees with a major in Educational Administration and Supervision. Students who enroll in this program must be admitted to The Graduate School of UTK.

Requirements for Advanced Degrees

Master's Degrees

Master's degree programs are available with thesis and non-thesis options. These programs require 45 or more graduate hours of course work. In addition to the M.A. and M.S. degrees, a number of other degrees are offered, including the M.A.C.T., the MBA, and the M.S.S.W. A complete listing is found under "Majors and Degrees Available," on pages 8-9. For specific degree requirements, consult individual program descriptions listed by college and department in this Catalog. See also the chart, page 21, for a summary of procedures for the degrees.

Course Requirements: A candidate for a Master's degree must complete a minimum of 45 hours of graduate credit in courses approved by the student's Master's committee. In thesis programs, a minimum of 9 quarter hours of credit in the major must be earned in course 5000 while the student is preparing the thesis. Hours applied to the Master's degree may be entirely from one major subject or may be distributed to include one or other minor areas. In a 45-hour program the major subject must include at least 18 hours of graduate course work, exclusive of course 5000, and a minor must include not fewer than 9 nor more than 18 hours of graduate credit.

At least two-thirds of the total hours in a Master's degree program must be taken at UTK in courses numbered at or above the 5000 level. Only 9 thesis hours can be counted toward this requirement.

Master's Committee: A committee composed of the major professor and at least two faculty members at the rank of assistant professor or above should be formed as early as possible in a student's program, and must be formed by the time a student applies for admission to candidacy (refer to Advisor/Major Professor, page 14). The responsibility of this committee is to assist the student in planning a course of study and carrying out research, and to ensure fulfillment of the degree requirements. If the student has a minor, one member of the committee must be from the minor department.

Information and appropriate forms may be obtained from the Director, c/o Dean, College of Education, UTC, Chattanooga, Tennessee 37403.

The University of Tennessee-Oak Ridge Graduate School of Biomedical Sciences: The University provides programs leading to the M.S. and Ph.D. degrees in various areas of biomedical sciences. Students have the opportunity to study and to do research in conjunction with the Biology Division of the Oak Ridge National Laboratory.

For complete information concerning the program see page 135.

School of Social Work: UTK offers a fully accredited two-year program leading to the degree of Master of Science in Social Work through the School of Social Work, with programs in Nashville, Knoxville, and Memphis.

For complete information concerning the program see page 153.
Admission to Candidacy: Application for admission to candidacy for the Master's degree is made as soon as possible after the student has completed all prerequisite courses and 15 hours of graduate course work with a 3.0 average or higher. All non-thesis students must submit the Admission to Candidacy form, with appropriate signatures, to the Graduate Office no later than commencement day of the quarter preceding the quarter in which he/she plans to graduate.

Thesis Registration: A student must be registered for course 5000 each quarter during work on the thesis, including a minimum of 3 hours in the term of the thesis. This examination, which must be scheduled through the Graduate Office, shall be held at least three weeks before the final date for approval and acceptance of theses by The Graduate School. Final examinations not properly scheduled must be repeated. The final draft of the thesis must be distributed to all committee members at least two weeks prior to the date of the final examination. In case of failure, the candidate may not apply for reexamination during the quarter in which the thesis is accepted by The Graduate School. Only one attempt to pass the oral examination is allowed without the permission of the major committee. The result of the second examination is final.

Thesis: The thesis represents the culmination of an original research project completed by the student. It must be prepared according to the UT Thesis and Dissertation Manual. Two copies of the thesis must be approved and accepted by The Graduate School or before the deadline specified each quarter in the Graduate School News. Each copy must include an abstract, signed by the members of the Master's committee, certifying that they have examined the final copy of the thesis and judged it to be satisfactory.

Non-Thesis: Non-thesis students using University facilities or faculty time must be registered for course 5002 if not registered for other courses. This applies to students removing incompletes from their records.

Final Examination for Non-Thesis Students: A non-thesis student must pass a final written examination on all work offered for the degree. A department may require an additional oral examination. The examination is not merely a test over course work, but a measure of the student's ability to integrate material in the major and related fields. It must be scheduled through the Graduate Office in accordance with the deadlines specified in the Graduate School News and will be conducted by the Master's committee. Final examinations not properly scheduled must be repeated.

Students taking the final examination but not otherwise using University facilities may pay a fee of $50 instead of registering. Students finishing incomplete courses, however, must register for a minimum of 3 quarter hours. In case of failure, the candidate may not apply for reexamination until the following quarter. The result of the second examination is final.

Time Limit: Candidates must complete all requirements for the degree in the time specified by the program. The result of the second examination is final.


Specialist in Education Degree

The Specialist in Education (Ed.S.) degree is offered in Counseling and Instruction, Educational Administration and Supervision, Educational Psychology and Guidance, Safety Education and Service, and Vocational-Technical Education. Admission to the Ed.S. program requires acceptance by The Graduate School, and review and acceptance by the department or area in which the student is majoring. It is recommended that students who apply for the Ed.S. have at least one year of related work experience. Additional information on admission requirements can be obtained from the Graduate School. All deadlines are published quarterly in the Graduate School News.

Ed.S. Committee: A committee of at least three faculty members is assigned to each student. A minimum of two members of this committee must represent the department or area of specialization. Its responsibilities include formulating the student's program of course work, recommending admission to candidacy, directing research, and coordinating the qualifying and final examinations.

Course Requirements: The student's program includes a minimum of six quarters of study totaling not fewer than 90 quarter hours of graduate credit beyond the baccalaureate degree. A minimum of 9 hours is required to be taken in the student's area of specialization and, frequently, one or more collateral fields. The latter are defined as a minimum of 9 quarter hours of graduate course work in a given area outside the student's major field.

Course Reexamination: Each doctoral student must take an appropriate number of 6000-level courses, usually a minimum of 9 quarter hours, at UTK. Normally a doctoral program includes a minimum of 36 hours of graduate course work beyond the Master's degree, graded A-F, plus the minimum 36 hours of dissertation work in course 6000. Additional work taken for S/N grading may not exceed one-fourth of the student's total graduate hours.
Doctoral Committee: The student and the major professor identify a doctoral committee composed of at least four faculty members, three of whom, including the chair, must be approved by the Graduate Council to direct doctoral research. At least one member must be from a department other than that of the student's major field. This committee is nominated by the department head or college dean, and approved by The Graduate School. The committee should be formed during the student's first year of doctoral study. Subject to Graduate Council policies and individual program requirements, the committee must approve all course work applied toward the degree, certify the student's mastery of the major field and any collateral fields, direct the research, and recommend the dissertation for approval and acceptance by The Graduate School.

Continuous Registration: The student must register continuously for course 6000 (minimum of 3 hours) from the time that the doctoral research proposal is approved, admission to candidacy is accepted, or registration for course 6000 is begun, whichever comes first, including summer quarters and the quarter in which the dissertation is approved and accepted by The Graduate School. A minimum total of 36 hours of course 6000 is required before the dissertation will be accepted. A student who will not be using faculty services and/or university facilities for a period of time may request leaves of absence from dissertation research up to a maximum of eight quarters. The request will be considered by The Graduate School upon recommendation of the department head.

Doctoral Examinations: Departments may, at their discretion, administer diagnostic or placement examinations to determine the student's preparation to complete a comprehensive examination and a final examination is required for all doctoral degrees.

1. Diagnostic or placement examinations, which can be written and/or oral, may be given to students on admission to the doctoral program to help determine the student's level of preparation, areas of strengths and weaknesses, and general background. Since courses bearing the same title may vary in content from institution to institution, the diagnostic or placement examinations are designed to aid in the selection of courses and to determine the student's preparation to continue doctoral studies at UTK.

2. Qualifying examinations, which may be written and/or oral, may be given to students near the end of their first year in the doctoral program. Qualifying examinations are designed to test the student's progress, general knowledge of fundamentals of the field, and fitness to continue with the more specialized aspects of the doctoral program.

3. The comprehensive examination (or the final part of this examination, when parts are given at different times during the student's course of study) is normally taken at the student's option, administer diagnostic and/or placement examinations are required. Language requirements must be met at UTK and cannot be transferred from another institution. When the student is prepared to take a language examination, he/she should complete an Application for Doctoral Language Examination at the Graduate Office in accordance with the dates and times for the examinations printed in the Graduate School News. Satisfactory completion (grade of B or better) of a 3030 course in a language department may be substituted for a language examination. This course cannot be repeated to satisfy the language requirement.

Admission to Candidacy: A student may be admitted to candidacy for the doctoral degree after passing the comprehensive examination, fulfilling any language requirements (for Ph.D.), and maintaining at least a B average in all graduate course work. Admission to candidacy must be applied for and approved at least two full quarters prior to the date the degree is to be conferred. Each student is responsible for filing the admission to candidacy, which must be signed by the doctoral committee and approved by the Vice Chancellor for Graduate Studies and Research.

Dissertation: The dissertation represents the culmination of an original major research project completed by the student. The organization, method of presentation, and subject matter of the dissertation are important in conveying to others the results of such research.
# Summary of Procedures for Master’s and Specialist in Education Degrees

<table>
<thead>
<tr>
<th>PROCEDURES</th>
<th>UNDER DIRECTION OF</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission as a potential graduate degree candidate</td>
<td>Graduate Office and Major department</td>
<td>Prior to completing 18 hours of graduate courses</td>
</tr>
<tr>
<td>Formation of Master’s/Ed.S. committee</td>
<td>Advisor/Major professor</td>
<td>Prior to application for admission to candidacy</td>
</tr>
<tr>
<td>Submission of application for admission to candidacy</td>
<td>Master’s/Ed.S. committee</td>
<td>At least one quarter prior to graduation*</td>
</tr>
<tr>
<td>Approval of admission to candidacy</td>
<td>Vice Chancellor for Graduate Studies and Research</td>
<td>Prior to graduation</td>
</tr>
</tbody>
</table>

## GRADUATION REQUIREMENTS FOR NON-THESIS OPTION

| Placement of name on graduation list            | Student                                   | Indicate on registration materials       |
| Application for diploma                        | Graduate Office                           | Deadline available at registration*      |
| Scheduling of final examination                | Graduate Office                           | Not later than one week prior to final examination* |
| Final examination(s)                           | Master’s/Ed.S. committee                  | Not later than three weeks prior to Commencement* |
| Removal of incomplete(s)                       | Instructor of course                      | Not later than one week prior to Commencement* |

## GRADUATION REQUIREMENTS FOR THESIS/PROBLEMS OPTION

| Placement of name on graduation list            | Student                                   | Indicate on registration materials       |
| Application for diploma                        | Graduate Office                           | Deadline available at registration*      |
| Submission of thesis/problems to Master’s/Ed.S. committee | Student                                   | At least two weeks prior to final examination |
| Scheduling of final examination                | Graduate Office                           | Not later than one week prior to final examination* |
| Final examination(s)                           | Master’s/Ed.S. committee                  | Not later than three weeks prior to thesis deadline* |
| Approval and acceptance of final copy of thesis and thesis card | Master’s/Ed.S. committee and The Graduate School | After final examination and not later than two weeks prior to Commencement* |
| Removal of incomplete(s)                       | Instructor of course                      | Not later than one week prior to Commencement* |

*Deadlines are printed in the Graduate School News quarterly.
# Summary of Procedures for Doctoral Degrees

<table>
<thead>
<tr>
<th>PROCEDURES</th>
<th>UNDER DIRECTION OF</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission as a potential degree candidate</td>
<td>Graduate Office and Major department</td>
<td>Prior to completing 18 hours of graduate courses</td>
</tr>
<tr>
<td>*Appointment of doctoral committee</td>
<td>Assistant Dean for Graduate Studies on recommendation of department head</td>
<td>Preferably during the first year of graduate study but, at the latest, prior to admission to candidacy</td>
</tr>
<tr>
<td>*Comprehensive examination</td>
<td>Major department</td>
<td>Prior to admission to candidacy</td>
</tr>
<tr>
<td><em>Foreign language examination(s)</em>*</td>
<td>Graduate Office</td>
<td>Prior to admission to candidacy</td>
</tr>
<tr>
<td>Submission and approval of application for admission to candidacy (Forms at Graduate Office)</td>
<td>Doctoral committee and Vice Chancellor for Graduate Studies and Research</td>
<td>At least three quarters prior to graduation***</td>
</tr>
</tbody>
</table>

## GRADUATION REQUIREMENTS

<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>UNDER DIRECTION OF</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placement of name on graduation list</td>
<td>Student</td>
<td>Indicate on registration materials</td>
</tr>
<tr>
<td>Application for diploma</td>
<td>Graduate Office</td>
<td>Deadline available at registration***</td>
</tr>
<tr>
<td>Submission of dissertation to doctoral committee</td>
<td>Student</td>
<td>At least two weeks prior to final examination</td>
</tr>
<tr>
<td>Scheduling of final examination</td>
<td>Graduate Office</td>
<td>Not later than one week prior to final examination***</td>
</tr>
<tr>
<td>Final examination(s)</td>
<td>Doctoral committee</td>
<td>Not later than three weeks prior to dissertation deadline***</td>
</tr>
<tr>
<td>Approval and acceptance of final copy of dissertation, doctoral forms, and thesis card</td>
<td>Doctoral committee and The Graduate School</td>
<td>After final examination and not later than two weeks prior to Commencement***</td>
</tr>
<tr>
<td>Removal of incomplete(s)</td>
<td>Instructor of course</td>
<td>Not later than one week prior to Commencement***</td>
</tr>
</tbody>
</table>

---

**The order of these items varies with individual programs.**

**Not required in some programs.**

***Deadlines are printed in the Graduate School News quarterly.
accomplishments of the Agricultural
urban populations gain from the
consumer health and nutrition. Both farm and
economic aspects of rural living; and to
gain and applying knowledge efficiently to
the biological, physical, and economic phases
growth and extension for dissemination of such knowledge to rural
people. Thus the Institute of Agriculture has
come to include the work of three main
divisions: Agricultural Experiment Station,
Agricultural Extension Service, and College of
Agriculture.

In 1974 the College of Veterinary Medicine
was established within the Institute. The
college is developing research and graduate
programs in veterinary medical sciences in
addition to the professional curriculum leading
to the degree, Doctor of Veterinary Medicine.

Agricultural

Experiment Station

D. M. Gossett, Dean
T. J. Whatley, Associate Dean
J. E. Sewell, Assistant Dean

The Agricultural Experiment Station was
established by the University’s Board of
Trustees on June 8, 1882, five years before
the passage of the Hatch Experiment Station
Act by the U.S. Congress. The University was
one of the first five institutions in the U.S. to
establish an Agricultural Experiment Station.

Since its beginning the Station has given first
attention to investigations of concern to the
agriculture of Tennessee. The investigations
of the Station follow a systematic method of
gaining and applying knowledge efficiently to
the biological, physical, and economic phases
of producing, processing, and distributing farm
and forest products; to the social and
economic aspects of rural living; and to
conservation of natural resources. Both farm and
urban populations gain from the
accomplishments of the Agricultural
Experiment Station. Examples of some of
these accomplishments are new and improved
varieties of crops, new and better methods of
controlling crop and livestock pests, more
efficient production of crops and pasture
through improved fertilization and
mechanization, and more efficient feeding and
management of livestock.

The program is designed and administered
through sixteen subject matter departments
located at Knoxville. A number of the staff
have teaching responsibilities in addition to
their research. To assist in the research
program the Station supports a large number
of graduate students. To serve Tennessee’s
diverse agriculture, branch stations are
operated at Jackson, Milan, Grand Junction,
Spring Hill, Springfield, Lewisburg, Crossville,
Greeneville, Martin and a forestry branch
station at Oak Ridge. Professional and
technical staff are in residence at these
locations.

Agricultural Extension

Service

M. L. Downen, Dean
T. W. Hinton, Associate Dean
M. F. Clarke, Assistant Dean
B. G. Hicks, Assistant Dean

The Agricultural Extension Service was
established in 1914. Its purpose is to extend
through various educational means
agricultural and home economics information
to farm families and others in the state who do
not have the opportunity to enroll in resident
courses of instruction at colleges.

The educational program is carried on
through offices in each of the ninety-five
counties of the state. Educational emphasis
includes work in four major program areas:
agriculture and natural resources, community
resource development, home economics, and
education of young people through 4-H Clubs.
County Extension staff members working
directly with local people are supported in the
various information fields by a specialist staff,
members of which are stationed either in
Knoxville, Nashville, or Jackson.

The Agricultural Extension Service operates
administratively as one of four units of the
Institute of Agriculture. For administration the
state is divided into five districts with
supervisors located in their respective
districts. District headquarters are maintained
in Knoxville, Chattanooga, Cookeville,
Nashville, and Jackson.
The Agricultural Extension Service operates
as a three-way partnership among county,
state, and federal governments. The University of Tennessee represents state and
federal government and a County Agricultural
Extension Committee represents county
government in this partnership.

College of Agriculture

O. Glen Hall, Dean

Graduate programs of the College of
Agriculture are designed to prepare men and
women for positions of leadership in industry,
state and federal government, teaching,
research, and extension.

The graduate student is expected to
demonstrate a thorough knowledge of the
subject matter in his/her specialized field of
study and its relationship to the sociological,
economic, and environmental impact on
society. The student must demonstrate the
ability to plan, conduct, analyze, and report
original research. More importantly, emphasis
is given to intellectual growth and to the
development of scholarly habits of study,
reasoning and analysis to the end that the
graduate will continue to grow and develop
professionally throughout his/her career.

MASTER OF SCIENCE PROGRAMS

Programs of graduate study leading to the
Master of Science degree are offered through all
departments in the College of Agriculture.
The general rules of The Graduate School
apply to all graduate work in the college. The
graduate program may be entirely in one
major subject or may include subject matter
areas related to the major.

Both majors and minors are available in
Agricultural Economics, Agricultural
Engineering, Agricultural Extension
Agricultural Mechanization, Animal Science,
Entomology and Plant Pathology, Food
Technology and Science, Ornamental
Horticulture and Landscape Design, and Plant
and Soil Science. Majors only are available in
Forestry and Wildlife and Fisheries Science, and minors are available in General Agriculture and Rural Sociology. The minor in General Agriculture requires 18 hours of course work. A complete listing of majors is shown on pages 8-9.

For admission to a graduate degree program, the student must have a satisfactory academic average and have completed the substantial requirements for an undegraduate major in his/her field of study or have completed sufficient undergraduate work in related areas to satisfy the department that he/she can successfully pursue graduate study in the chosen field. Prerequisite courses may be required when the student's preparation is deemed to be inadequate.

Each program of course work and thesis research is planned by the major professor and Master's advisory committee in consultation with the student and will depend upon the student's background, interests, and professional objectives. For example, a student majoring in Entomology and Plant Pathology may pursue work with an emphasis either in the area of plant pathology or economic entomology.

Normally, graduate programs will include the thesis requirement. There is, however, a non-thesis option in the Department of Agricultural Economics and Rural Sociology and the Department of Forestry, Wildlife and Fisheries.

The non-thesis option with a major in Agricultural Economics has the following minimum requirements:

1. 48 hours of course work of which 32 hours must be at the 5000-level or above.
2. 18 hours in agricultural economics.
3. 9 hours of economic theory.
4. 6 hours in quantitative methods in agricultural economics, statistics, or mathematical economics.
5. Final comprehensive written and oral examination.

Requirements of the non-thesis option for the Master of Science degree with a major in Forestry are as follows:

1. 50 hours of course work of which 34 hours must be at the 5000 level or above.
2. An advisory committee of not less than 3 faculty members will be selected. At least one member in addition to the major professor will be from the Department of Forestry, Wildlife and Fisheries. The committee will meet and schedule the student's program during the first quarter in residence.
3. Forestry 5011 (3).
4. 12 hours of course work in the Department of Forestry, Wildlife and Fisheries at the 5000 level or above, exclusive of Forestry 5011.
5. Final comprehensive written and oral examination.

DOCTORAL PROGRAMS

Graduate study programs leading to the Doctor of Philosophy degree in Animal Science, Agricultural Economics, Agricultural Engineering, Food Technology and Science, and Plant and Soil Science are offered in the college.

General Graduate School requirements relative to admission, faculty advisory committees, residence, grades, research, and admission to candidacy for degree apply to all doctoral programs. In addition, the College of Agriculture requires:

1. Minimum of 108 quarter hours credit beyond the Bachelor's degree, exclusive of the credit for the Master's thesis. Of this number, students are required to complete a minimum of 36 quarter hours in 6000 Doctoral Research and Dissertation.
2. A minimum of 30 quarter hours credit will be in courses numbered 5000 and 6000, exclusive of Doctoral Research and Dissertation.

The specific program of a candidate for the Doctor of Philosophy degree in the College of Agriculture will depend upon the interest and previous training of the candidate. Each candidate will be under the immediate supervision of a faculty advisory committee in planning his/her program. The major professor will serve as chairperson of the faculty advisory committee and will direct the research and preparation of the dissertation.

Special departmental requirements are listed in the following paragraphs.

Agricultural Economics and Rural Sociology

Subject Area Requirements: All candidates pursuing the Doctor of Philosophy degree will be required to demonstrate competence in examinations in the following areas:

A. A major area of concentration to be selected from the following:
1. Agricultural policy
2. Agricultural marketing and price analysis
3. Farm management and production economics
4. Natural resource economics
5. Rural development
B. The candidate will be required to demonstrate competence in 3 additional fields.
1. Agricultural economics
2. Economic theory
3. Mathematical and quantitative methods in agricultural economics

Additional Course Requirements: At least 30 hours of course work shall be in agricultural economics and 15 hours in economics. Excluding the dissertation, a minimum of 21 hours in agricultural economics and 36 hours in agricultural economics and economics combined must be in courses numbered 5000 and above.

Agricultural Engineering

Concentrations:
1. Agricultural power and machinery
2. Soil and water conservation engineering
3. Agricultural structures
4. Electric power and processing

Supporting studies are required in related biological, physical, and engineering sciences and mathematics fundamental to the training of the candidate.

Additional Course Requirements: The program of each candidate shall consist of a major and supporting studies in one or more additional areas. The major shall consist of a minimum of 24 quarter hours exclusive of research and dissertation. A minimum of 24 quarter hours shall be taken in departments outside of the Department of Agricultural Engineering.

Animal Science

Concentrations:
1. Animal nutrition
2. Animal breeding
3. Animal physiology

Supporting studies are required in related biological and physical sciences fundamental to the training of the candidate.

Additional Course Requirements:

1. A minimum of 24 quarter hours credit must be completed in related fields outside of animal science.
2. At least 36 quarter hours credit in courses at the 5000 and 6000 level, exclusive of Doctoral Research and Dissertation. At least 9 of the 36 hours must be in 6000-level courses.

Food Technology and Science

Concentrations:
1. Food products
2. Food chemistry
3. Food microbiology

Supporting studies will be required to provide fundamental training in sciences related to the student's specialized area. Various commodity interests can be emphasized in all three areas by judicious selection of courses and dissertation topics.

Additional Course Requirements:

1. At least 36 quarter hours credit in courses at the 5000 and 6000 level, exclusive of Doctoral Research and Dissertation. At least 9 of the 36 hours must be in 6000-level courses.
2. A minimum of 9 hours of courses for graduate credit outside of the Department of Food Technology and Science.

Plant and Soil Science

Concentrations:
1. Soils
2. Plant breeding and genetics
3. Crop physiology and ecology

Supporting studies are required in related sciences fundamental to the training of the candidate.

Departments of Instruction

Agricultural Economics and Rural Sociology

MAJOR

DEGREES

Agricultural Economics

M.S., Ph.D.

Professors:
J. A. Martin (Head), Ph.D. Minnesota; M. B. Badenhop, Ph.D. Purdue; J. R. Brooker, Ph.D. Florida; D. W. Brown, Ph.D. Iowa State; C. L. Cieland, Ph.D. Wisconsin; I. Dubov, Ph.D. California (Berkeley); L. H. Keller, Ph.D. Kentucky; T. H. Klinth, Ph.D. Kentucky; F. O. Leuthold, Ph.D. Wisconsin; D. L. McAloney, Ph.D. Clemson; B. R. McManus, Ph.D. Purdue; D. B. Seepleton, Ph.D. Illinois.

Associate Professors:
G. E. Anderson, Ph.D. Illinois; B. J. Trevena, Ph.D. Illinois; D. W. Brown, Ph.D. Iowa State; C. L. Cieland, Ph.D. Wisconsin; I. Dubov, Ph.D. California (Berkeley); L. H. Keller, Ph.D. Kentucky; T. H. Klinth, Ph.D. Kentucky; F. O. Leuthold, Ph.D. Wisconsin; D. L. McAloney, Ph.D. Clemson; B. R. McManus, Ph.D. Purdue; D. B. Seepleton, Ph.D. Illinois.

Assistant Professors:
W. M. Park, Ph.D. Virginia Polytechnic Institute; G. D. Whipple, Ph.D. Washington State.

The Department has programs for the Doctor of Philosophy degree and the Master of Science degree with a thesis or non-thesis option.
Agricultural Economics
4120 Farm Management (3) Principles of farm organization and operation; nature of managerial processes; economic aspects of crop, livestock, labor and machinery planning; use of budgeting techniques for cost and financial analysis; field trips arranged. Prereq: Agriculture 1110 and Economics 2120. 2 hrs and 1 lab. F, W

4140 Agricultural Production Economics I (3) Application of microeconomic theory to problems of resource allocation, product selection, scale of operation of agricultural firms; economic interpretation of technical agricultural production relationships. Prereq: Agriculture 1110 and Economics 2120. W

4240 World Agriculture and Trade (3) Economic bases of world agricultural production and trade; resource location, land tenure systems, international trade and commercial policy. Prereq: Agriculture 1110 and Economics 2120, or consent of instructor. F

4250 Agricultural and Rural Planning (3) Decision-making concepts applied to design and implementation of local action programs. Case examples from the U.S. and other countries. Prereq: Agriculture 1110 and Economics 2120, or consent of instructor. Su

4310 Agricultural Finance (3) Nature and source of capital; credit problems of farmers; kinds and sources of farm credit. Agricultural insurance and taxation. Prereq: Agriculture 1110 and Economics 2120. W

4320 Agricultural Policy (3) Meaning of agricultural policy in democratic society; relationship of farm group problems giving rise to policy; agricultural policy and appraisal of results; policy problems. Prereq: Agriculture 1110 and Economics 2120. F

4330 Land Economics (3) Problems and policies of land use, conservation, development, taxation, and tenure; population growth and demand for land; principles and theories of rent, property, value, and income. Prereq: Agriculture 1110 and Economics 2120. F

4610 Management of Farm Supply and Marketing Firms (3) Operation of firms selling farm supplies and merchandising agricultural products. Emphasis on accounting data and economic theories for decision making. Prereq: Agriculture 1110 and Economics 2120. F

4630 Advanced Agricultural Marketing (3) Economics of market location and pricing; perfect market model; spatial equilibrium analysis; production and market price determination; production process and storage costs; maximizing returns, institutions and market flows; measuring efficiency. Prereq: 3120 or 3520 or consent of instructor. W

5000 Thesis (1-15) P/NP only. E

5002 Non-Thesis Graduation Completion (3-15) Required for the non-thesis student not otherwise registered during any quarter when such a student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated S/NC only. E

5011 Special Problems in Lieu of Thesis (3) S/NC only. E

5130 Agricultural Production Economics II (3) Theoretical and empirical concepts of agricultural allocation problems under various knowledge situations with emphasis on uncertainty. Aggregate external effects of decisions made by individual agriculturalists and policy planning in relation to agriculture. Prereq: 4140 or equivalent. Sp

5210 Seminar: Agricultural Policy (3) Sp

5220 Research Methodology (3) Nature of scientific method, logic, philosophy, assumptions, potential and limitations of science; methodological problems of social sciences, and application of these to research. Prereq: Consent of instructor. W

5230 Seminar: Adjustments to Industrialization (3) F

5310 Research (3) Special research problems in agricultural economics and rural sociology. Gathering, tabulating and interpreting data and report writing. May be repeated S/NC only. E

5410 Agricultural Marketing Analysis (3) Analysis of structure, conduct, and performance of agricultural marketing system; application of price theory concepts to actual industry problems used to examine industry conduct and performance. Prereq: Economics 3110 or consent of instructor. Sp

5420 Advanced Land and Natural Resource Economics (3) Economic efficiency in natural resource allocation; issues in project and policy evaluation. Prereq: 4330 and Economics 5110, or consent of instructor. F

5440 Economics of Agricultural Development (3) Role of agriculture in overall economic development; impacts of world food situation on people, environment, development; natural and human resources for food production; technology and change; national and international economic policy. Prereq: 4240 or consent of instructor. W

5610 Quantitative Methods in Agricultural Economics (3) Analytical techniques used in estimation of functions—supply, demand and production—and prediction of economic variables. Emphasis on application of multiple regression: model specification, estimation technique using computer and interpretation of results. Prereq: Statistics 4310 or Economics 5510 or consent of instructor. F

5710 Linear Programming (3) Techniques with empirical applications to problems of firm and region; maximizing firm profit, minimizing firm costs, transportation, risk analysis and space and time. Prereq: Consent of instructor. F

5820 Agricultural Price Analysis (3) Application of various research methods to analysis of price structures; specification and estimation of price determination models and interpretation of results. Prereq: 3120 and 5610 or Statistics 4310 or consent of instructor. Sp

6000 Doctoral Research and Dissertation (3-15) P/NP only. E

6120-30 Seminars in Agricultural Economics (3,3) Topics selected from the areas of economics of production, consumption or distribution in agriculture and related industries and public policies concerned with agriculture and related industries. F, Sp

6210 Agricultural and Rural Transformation Problems (3) Systematic evaluation of policy and development proposals related to agricultural modernization, food supply, and rural living. Decision making process and useful roles of social scientists. Analysis of current issues in U.S. and developing nations. Prereq: 5820 or consent of instructor. Sp

6410 Agricultural Supply Analysis (3) Estimating agricultural supply relationships using aggregate time series regression, production functions, linear programming, simulation and firm growth models with emphasis on correspondence between theoretical concepts and model attributes. Prereq: 5130 or consent of instructor. F

6420 Marketing and Resource Use (3) Institution settings for research and policy formulation; analytical tools to measure efficiencies of marketing and resource use; emerging problems in marketing and resource use. Prereq: 5410 or consent of instructor. W

Rural Sociology
3420 Rural Sociology (3) Nature of rural society: social system concepts, rural-urban differences; nature of social relations; population characteristics and movement; problems of rural people; tenancy, farm labor, health, services, educational facilities, churches, local government; impact of industrialization. F, W, Sp

4450 Diffusion of Agricultural Technology (3) Analyzing and predicting the adoption of new techniques as they spread from scientists to final adopters. Adaption process, communication behavior, mass media, role of professional change agents, opinion leaders, and two-stage flow hypothesis. Prereq: 3420 or consent of instructor. Sp

5340 Special Problems (3) Special topics in rural sociology. Prereq: 3420 or consent of instructor. May be repeated. Maximum 9 hrs. S/NC only. E

4300 Seminar in Rural Sociology (3) Current rural sociological literature and research; relevance of general sociological theory and methodological techniques. Prereq: 3420 or equivalent. F

5459 Advanced Rural Sociology (3) Application of sociological concepts to analysis of changing structure and function of rural life; rural social values, attitudes, and norms as they influence the family, formal and informal groups, population shifts and changes, farm technology. Prereq: 3420 or equivalent. W

5470 Research Problems in Rural Communities (3) Emphasis on problems that arise in survey research in rural areas. Sampling procedures, questionnaire construction, interviewer selection, training, control, and legitimization needs. Prereq: Undergraduate course in statistics. Sp

5490 Rural Population Analysis (3) Analysis of U.S. and world population changes and determinants of fertility, mortality, and migration with emphasis upon changes in rural sector. Prereq: Sociology 4110 or equivalent. W

Agricultural Engineering
4230 Selected Topics in Agricultural Engineering (3) Develop new topics as required by current trends and problems in agricultural engineering. F

4510 Design of Water Control and Waste Utilization Systems (3) Earth dams, irrigation, drainage, leach beds, hydraulic transport of wastes, and problems in agricultural engineering. Prereq: 3610 or consent of instructor. 1 hr and 2 labs. W

4520 Design of Structures for Production, Processing and Environmental Control (3) Functional requirements of structural and environmental aspects. Prereq: 3620 or consent of instructor. 1 hr and 2 labs. Sp

5350 Design of Materials Handling Systems (3) Development of systems and components for integrated agricultural processing considering mass and energy balances, product characteristics, equipment specifications, storage, handling and economic merit. Prereq: 3630. 1 hr and 2 labs. F

4640 Design of Agricultural Machinery (3) Functional requirements of agricultural machinery. Elements of machine component design; synthesis of mechanisms; mechanical and hydraulic drives. Team effort in completing machine design project. Prereq: 3640 or consent of instructor. 1 hr and 2 labs. Sp

5000 Thesis (1-15) P/NP only. E

5240 Environmental Control in Agricultural Structures (3) Engineering aspects of factors relating to processes of animal and plant life; basis for development of and design of facilities and structures for confined housing of animals, controlled environ-
ment for plant growth, and storage facilities for plant and animal products. Prereq: Agricultural Mecha-

nization 3220, Mechanical Engineering 3110 or con-
sent of instructor. 2 hrs and 1 lab. Sp, A

6340 Hydrology of Agricultural and Forest Lands (3) Analytical approach to problems involving water surplus, deficiency and time distribution as related to agricultural and forest practices. Prereq: 3610, intro-
ductive hydrology; Forestry 4020, or consent of in-
structor. 2 hrs and 1 lab. F

5440 Instrumentation in Agricultural Systems (3) Analysis of specific instrumentation needs in agri-
cultural industry and research problems; principles and design in utilization of specialized instrumentation. Prereq: Engineering electronics or consent of instructor. 2 hrs and 1 lab. Sp, A

5540 Engineering Properties of Agricultural Materials and Products (3) Fundamental engineer-
ing properties of agricultural products and materials related to handling, processing, and utilization. Prereq: Processing and materials handling systems and Engineering Science and Mechanics 3511. 2 hrs and 1 lab. Sp, A

5640 Research Problems in Agricultural En-
lab. Sp, A

5110 Research Problems in Agricultural Mecha-
nization (3) Research problems related to recent de-
velopments and current practices in agricultural mecha-
nization. May be repeated. Maximum 9 hrs.

5210 Electromechanical Systems in Agriculture (3) Integration of electric power, mechanical equip-
ment, structures, and environmental systems to plant and animal production, crop processing, and materials handling. Prereq: 3220 and 3510. 2 hrs and 1 lab. F, Sp

5410 Agricultural Machinery Systems Analysis (3) Analysis of current field machinery; adaptation planning for sequential operations; machinery for un-
ique and alternate production and harvesting systems; operational management. Prereq: 4210. 2 hrs and 1 lab. Sp, A

5610 Selected Topics in Agricultural Mechanization (3) Lecture, group discussion, and individual study on specialized agricultural mechanization de-
velopments. May be repeated. Maximum 9 hrs. F

Agricultural Extension Education

MAJOR

Agricultural Extension DEGREE

M.S.

Professors:
R. S. Dotson (Head), Ph.D. Pennsylvania State; C. E. Carter, Jr., Ph.D. Ohio State; C. H. H. Cary, Ph.D. Chicago; G. E. Bedard, Ed.D. and W. A. C. Wilson, Ph.D.

3110 Introduction to Agricultural Extension (3) History; philosophy; organization; teaching methods; relationships with other educational agencies. Prereq: 3110, consent of instructor.

5120 Teaching Internship in Agriculture (1) Supervised experience in teaching; test preparation, and evaluation of agriculture students. May be repeated. Maximum 3 hrs for M.S. students; 6 hrs for Ph.D. students.

Agriculture

5120 Teaching Internship in Agriculture (1) Su-

3210 Animal and Physiology of Farm Animals (4) Skeletal and joint systems, muscular systems, bone and muscle development, and nervous, circulatory, respiratory, digestive and endocrine systems; demonstrations of physiologic phenomena. Prereq: Biology 1210 or Agricultural Education 1130. 3 hrs and 1 lab. F, W, Sp

3220 Physiology of Reproduction (3) Comparative anatomy and physiology of reproductive systems of higher vertebrates, gametogenesis, fertilization, im-
plantation, prenatal growth, parturition and initiation of lactation; endocrine regulation of reproductive functions; normal and abnormal processes. Prereq: 3210. 2 hrs and 1 lab. F, W, Sp

3320 Animal Nutrition (3) Properties, functions, uti-

lization and deficiency symptoms of essential nut-
rients; nutritive value determinations and their use. Prereq: Agriculture 1130 and one quarter of organic chemistry. F, W, Su

3330 Feeds and Ration Formulation (4) Feed-

stuffs, additives, feeding standards, nutrient require-
ments and ration formulation for beef and dairy cat-
tle, sheep, horses, swine, poultry and laboratory animals. Prereq: 3320. 2 hrs and 2 labs. W, Sp, Su

3410 Heredity in Animals (3) Basic chromosomal and Mendelian principles and exceptions such as linkage and cyto-
plasmic inheritance. Introductions to the biochemical basis of heredity and to quantitation and inheritance. Illustrations of principles related to species familiar to agriculture students. Prereq: Agriculture 1130. 2 hrs and 1 lab. F, W, Sp

3420 Principles of Animal Breeding (3) Genetic principles in the breeding of economic species. Genetic basis of variation. Partitioning of variation according to various kinds of causative factors such as those in genetic makeup and environment. Selection and its consequences. Mating systems and their effects on populations. Planning breeding programs. Prereq: 3410 or equivalent. 2 hrs and 1 lab. F, Sp
3510 Animal Hygiene and Sanitation (4) Parasitic and viral bacteria and organisms in farm animals; immunization; control and protection against disease; veterinary regulations and quarantine; herd health procedures. Prereq: Microbiology 2910-11 or 2910-19 or consent of instructor. 3 hrs and 1 lab. F, W, Sp

3520 Avian Diseases (3) Major diseases; characteristics, prevention and treatment, management practices, and systems of disease control. Structures of yards, bird, and water fowl. 2 hrs and 1 lab. Sp, A

3810 Nutrition and Management of Laboratory Animals (3) Principles of feeding, breeding, and handling of animals in scientific investigations; specific species' requirements, peculiarities, and required care. 3 hrs and 1 lab. W, Sp

4210 Zoology of Lactation (3) Development, anatomy, and function of mammary glands; endocrine interactions for mammary development and milk secretion; factors affecting yield and composition of milk. Prereq: 3210. W

4220 Avian Physiology (3) Anatomy and physiology of avian species with emphasis on poultry. Prereq: 3210. 2 hrs and 1 lab. Sp

4230 Applied Reproduction in Farm Animals (3) Application of reproduction and nutrition techniques in collecting, evaluating, processing, and preparing semen; in-semination of females; pregnancy determination; genetics and population. Prereq: Microbiology 2910-11 or consent of instructor. 3 hrs and 1 lab. F, Sp, A

4330 Feeding Applications for Farm Animals (3) Detailed application of feeding principles designed to allow student to discover and explore feeding options available to producers through problem solving. Prereq: 3330. 1 hr and 2 labs. Sp

4340 Experimental Animal Nutrition Laboratory (2) Demonstration of animal nutrition concepts including preparation and feeding of experimental diets. Prereq: 3330. W

4810 Beef Cattle Production and Management (4) Principles of nutrition, physiology, and breeding in a complete beef cattle management program. Structure of industry, enterprise establishment, systems of production, production practices and herd improvement programs. Alternatives in terms of production response and economic returns. Prereq: Completion of animal science sophomore and junior core courses or consent of instructor. 3 hrs and 1 lab. F, Sp, A

4820 Dairy Cattle Production and Management (4) Principles of nutrition, physiology, and breeding in a complete dairy cattle management program. Structure of industry, enterprise establishment, systems of production, production practices and herd improvement programs. Alternatives in terms of production response and economic returns. Prereq: Completion of animal science sophomore and junior core courses or consent of instructor. 3 hrs and 1 lab. F, W

4830 Pork Production and Management (4) Integration of principles of selection, nutrition, breeding, physiology and marketing in a complete pork production and management program. Structure of industry, enterprise establishment, systems of production, production practices and herd improvement programs. Alternatives in terms of production response and economic returns. Prereq: Completion of animal science sophomore and junior core courses or consent of instructor. 3 hrs and 1 lab. F, W

4840 Poultry Production and Management (4) Structure of poultry industry, organization and management of poultry enterprises including rearing, housing, feeding, processing and marketing. Prereq: Completion of animal science sophomore and junior core courses or consent of instructor. 3 hrs and 1 lab. W

4850 Light Horse Production and Management (4) Integration of principles of nutrition, physiology and breeding into light horse management program.
Food Technology and Science

MAJOR

DEGREES

Food Technology and Science

M.S., Ph.D.

Professors:

J. T. Miles (Head), Ph.D. Wisconsin; J. L. Collins, Ph.D. Maryland; H. O. Jaynes, Ph.D. Illinois; C. C. Melton, Ph.D. Kansas State; W. W. Overcast (Emeritus), Ph.D. Kansas State.

Associate Professors:

B. J. DaMott, Ph.D. Michigan State; S. L. Melton, Ph.D. Tennessee; M. J. Riemann, Ph.D. Kansas State.

Assistants Professors:

M. P. Davidson, Ph.D. Washington State; F. A. Draughon, Ph.D. Georgia; J. R. Mount, Ph.D. Ohio State.

Adjunct Professors:


Food Technology and Science

Majors:

AGRICULTURAL AND ENVIRONMENTAL SCIENCES

For the Bachelor of Science degree, 120 semester hours are required. Students must complete the major through the Department of Food Science and Technology, the College of Agriculture, Food Science, and Natural Resources.

Core Courses:

- Food science and technology (6 hours)
- Food chemistry (3 hours)
- Food microbiology (3 hours)
- Food engineering (3 hours)
- Food economics (3 hours)
- Food law (3 hours)
- Food technology (3 hours)
- Food processing (3 hours)
- Food quality assurance (3 hours)
- Food safety (3 hours)
- Food sensory evaluation (3 hours)
- Food technology internship (3 hours)
- Food technology capstone project (3 hours)

Elective Courses:

- Food science and technology (select from the list above, 12 hours)
- Food chemistry (select from the list above, 12 hours)
- Food microbiology (select from the list above, 12 hours)
- Food engineering (select from the list above, 12 hours)
- Food economics (select from the list above, 12 hours)
- Food law (select from the list above, 12 hours)
- Food technology (select from the list above, 12 hours)
- Food processing (select from the list above, 12 hours)
- Food quality assurance (select from the list above, 12 hours)
- Food safety (select from the list above, 12 hours)
- Food sensory evaluation (select from the list above, 12 hours)
- Food technology internship (select from the list above, 12 hours)
- Food technology capstone project (select from the list above, 12 hours)

Food Science and Technology requires 120 semester hours for graduation. Students must complete a minimum of 30 semester hours in the major, including at least 12 semester hours in upper-level courses.

Food Science and Technology requires 120 semester hours for graduation. Students must complete a minimum of 30 semester hours in the major, including at least 12 semester hours in upper-level courses.

For more information, visit the Food Science and Technology page on the University of Wisconsin-Madison website.
4020 Forest Watershed Management (3) Water as a forest resource; role of forests in the hydrologic cycle; control of water quantity, quality, and regimen; watershed protection and management; view of research and development. Prereq: Consent of instructor. 2 hrs and 1 lab. W
4210 Forestry Organization and Administration (3) Planning, organizing, and leadership concepts and cases; problem analysis and decision making in forest resource management. Prereq: Consent of instructor. 2 hrs and 1 lab. F
4220 Forest-Resource Management (4) The forest as integration of resource uses; review of traditional timber-management concepts; the multiple-use concept; valuation of forest resources for decision making; and planning; taxation of forest firm. Prereq: 2120. W
4230 Forest-Resource Management Plans (4) Field problems and case studies in forest-resource management; the forest as a system; management of forest enterprises as a producer of timber, recreational services, watershed services, and wildlife; producing multiple services: preparation of a complete plan based on optimizing forest uses. Prereq: 4210. Sp
4240 Interpreting Forest Resources (3) Principles and techniques of interpreting forest resources; importance of environmental interpretation to management of forest resources; development and administration of interpretive services. Possible overtime field trips required. Prereq: 3240 or equivalent. 2 hrs and 1 lab. Sp
4330 Forest Policy (3) History of forestry in the United States with emphasis on development of forest resource policies; current policies influencing development and management of forest resources; brief survey of policy implications of forest resource organizations in public and private sectors. Prereq: 4004. W
4340 Aerial Photography in Forest-Resource Management (3) Use of conventional aerial photos in forest-resource management; interpretation of detail, aerial inventories, preparation of cover-type maps, uses of other remotely sensed imagery. Prereq: 3110 or equivalent. 1 hr and 2 labs. Sp
4420 Forest Tree Improvement (3) Forest tree improvement related to silviculture; nature and purposes of tree improvement and forest genetics; principles of tree cytology and population genetics; importance of seed source; variation, selection of superior phenotypes and development of seed orchards; hybridization; seed production and seed certification. Prereq: 4006 or consent of instructor. 2 hrs and 1 lab. Sp
4430 Regional Silviculture of the United States (3) Factors that influence silviculture management of important tree species in North America. Importance of forests and their role as sources of food and fiber, including their role in wildlife, fisheries, and recreation. Prereq: 3002, 3040, Plant and Soil Science 3160 and Computer Science 1410 or equivalent. 3 hrs and 1 lab. W
4440 Forest Recreation (3) Forest lands as a recreation resource; the interrelationships of forest recreation and other management activities; development and management of forest recreation areas; socioeconomic and political determinants of recreation development and management. Prereq: 6 hrs sociology and/or economics. 2 hrs and 1 lab. Sp
4450 Recreational Behavior in Forest Environments (3) Review of sociological and psychological theories relevant to forest recreation planning, management, and administration. Implication and application of behavioral concepts to forest recreation problems; review of methodologies for assessing recreational behavior. Prereq: 3240 and 6 hrs in behavioral psychology and/or sociology, or consent of instructor. W

Mathematics 1851, Physics 1220, or consent of instructor.

5000 Thesis (1-15) P/NP only. E

5002 Non-Thesis Graduation Completion (3-15) Required for the non-thesis student not otherwise registered during any quarter when such a student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E

5011 Problem Analysis in Forest Resources (3) Problem identification, analysis and solution in forest resources management; identification, analyze, and prepare written report on a problem. Topic and report must have approval of all committee members. Formal presentation to faculty and students. Available only to students in the non-thesis option for the M.S. in Forestry.

5110 Special Problems in Forestry (1-5) May be repeated. Maximum 9 hrs. E

5220 Seminar in Forest Tree Biology (3) Growth, nutrition, and health of forest trees. Plant and soil science majors only.Required for the non-thesis student not otherwise registered during any quarter when such a student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E

5230 Seminar in Forest Management (3) Newer developments in forest organization and regulation; financial and operational planning in forest management. Prereq: 4230 or equivalent. W, A

5240 Seminar in Forest Genetics (3) Population genetics and speciation, variation patterns and heritability in forest trees, genetic identification of species, statistical methods: planning and conducting forest genetics research. Prereq: 4420, Biology 3110, and consent of instructor. W, A

5250 Recreation Planning for Forests and Associated Lands (3) Planning process for recreation development on forests and associated lands; analysis and critique of specific contemporary plans. Overnight field trips required. 2 hrs and 1 lab. F

5260 Industrial Forestry (3) Structure and analysis of wood-using firms and industries. Forest taxation, land tenure and wood procurement alternatives. Development and application of forestry planning models. Prereq: 4230 or consent of instructor. W

5270 Topics in Forest Industries Management (3) Cases of real-life enterprises from public and private sector business (concerned with forest industry) conduct classes in selected topics. Prereq: 4230 or consent of instructor. F

5280 Seminar in Forest Biometry (3) Theory and application of forest measurements and sampling; tree, log and lumber quality; volume estimation techniques; growth and yield prediction. Prereq: 4003 or consent of instructor. W

5310 Seminar (1) Current developments in forestry. Required of each graduate student in residence Winter Quarter. May be repeated. Maximum 2 hrs. S/NC only. W

Wildlife and Fisheries Science

5320 Wildlife Management (3) Lives and ecological relationships of wild animals; biological, social, and economic aspects of their management. 2 hrs and 1 lab. F

4450 Game Mammals (4) Classification, identification, distribution, natural history, and management principles of game mammals in North America. Prereq: 3230 or 1 yr of zoology. 2 hrs and 2 labs. F

4460 Game Birds (4) Biology, classification, identification, distribution, and management of game birds in North America. Prereq: 3230 or 1 yr of zoology. 3 hrs and 1 lab plus one weekend field trip. W

4510 Fish Populations (4) and Methods (1) Methods and principles of fish population estimation; sampling techniques and population dynamics; age and growth. Prereq: Biology 3130, 8 hrs mathematics, or *Graduate credit for non-forestry and non-wildlife and fisheries science majors only.
Some text is missing or incomplete.
5611-12 Pharmacology (1,2) Theories of transport across membranes. Introduction to principles of drug action and distribution. Receptor theory, adverse drug reactions; correlated with Animal Science 8240-50. Prereq: Consent of instructor.

6000 Doctoral Research and Dissertation (3-15) P/NP only. E

5010 Advanced Topics in Environmental Medicine (1-3) Current and future research methodology, laboratory situation, recent advances in instrumentation involved in analytical techniques for environmental medicine. Prereq: Consent of instructor. May be repeated. Maximum 8 hrs.

Pathobiology

Professors:
R. L. Michel (Head), V.M.D., Ph.D. Michigan;
M. D. McGavin, M.V.Sc., Ph.D. Michigan;
L. N. D. Potgieter, B.V.Sc., Ph.D., Iowa.

Associate Professors:
M. D. McCracken, D.V.M., Ph.D. Purdue;

Assistant Professors:
S. Patton, Ph.D. Kentucky; R. G. Russel, D.V.M.;
Ph.D. Saskatchewan; R. M. Shull, D.V.M. Cornell;
R. D. Walker, Ph.D. Oklahoma State.

5000 Thesis (1-15) P/NP only. E

5010 Comparative Pathology (5) Lectures and lab. Emphasis on pathogenic mechanisms. Comparative aspects considered. Lectures reinforced by lab study of gross, microscopic and ultrastructural lesions. Prereq: Zoology 3060, 3320. F, A

5000 Doctoral Research and Dissertation (3-15) P/NP only. E

6010 Special Topics in Pathology (1-3)

6020 Special Problems in Pathobiology (1-5) Projects of varying nature in necropsy, histopathology, clinical pathology, clinical parasitology, clinical immunology, clinical bacteriology and mycology, and clinical virology. May be repeated. Maximum 20 hrs.

6052 Pathogenesis and Diagnosis of Virus Diseases in Domestic Animals (5) Biology of viruses and pathogenesis of virus infection in domestic animals. Prereq: Biochemistry 4110-20, 4119; Microbiology 4430, 4439; consent of instructor.

Rural Practice

Professor:
H. T. Barron (Head), D.V.M. Texas A & M.

Associate Professors:
D. O. Goble, D.V.M. Kansas; F. M. Hopkins, D.V.M. Georgia.

5000 Thesis (1-15) P/NP only. E

6000 Doctoral Research and Dissertation (3-15) P/NP only. E

Urban Practice

Professors:
D. J. Krawinkel, (Acting Head), D.V.M. Auburn.

Associate Professors:
R. R. Padgett, D.V.M. Missouri; R. R. Selcer, D.V.M. Texas A & M.

5000 Thesis (1-15) P/NP only. E

6000 Doctoral Research and Dissertation (3-15) P/NP only. E

Animal Science/Veterinary Medicine

Professors:
D. O. Richardson (Head), Ph.D. Ohio State.

Associate Professors:

Veterinary Medicine

5343 Patterns of Disease (5) Host-agent relationship in disease of animals. Pathogenesis, laboratory diagnosis, control, and public health significance. Principles of epidemiology and application in study of diseases in animal populations. Prereq: Consent of instructor and Director, Comparative and Experimental Medicine Graduate Program.

5362 Veterinary Toxicology (3) Pharmacologic basis and pathologic features of diseases of animals caused by common toxic chemicals: clinical manifestations, diagnosis, and treatment. Prereq: Consent of instructor and Director, Comparative and Experimental Medicine Graduate Program.

5363 Public Health (2) Public health aspects of veterinary medicine and nature of related laws, ordinances and regulations. Veterinarian's role in protection of environment, ecology, and quality of food. Prereq: Consent of instructor and Director, Comparative and Experimental Medicine Graduate Program.

5372 Comparative Medicine (4) Diagnosis, prevention, and treatment of diseases of laboratory animals, avian species, and marine mammals, seen most commonly by practicing veterinarians. Prereq: Consent of instructor and Director, Comparative and Experimental Medicine Graduate Program.

5375 Principles of Medicine (4) Physiological and pathological principles underlying mechanisms of disease. Selected examples of human and animal diseases: recent advances in principles of veterinary medicine. Prereq: Consent of instructor and Director, Comparative and Experimental Medicine Graduate Program.

Microbiology

Professors:
A. Brown (Head), Ph.D. Chicago; R. W. Beck, Ph.D. Wisconsin; B. T. Rouse, Ph.D. Guelph.

Associate Professor:

For specific course listings please see College of Agriculture, Department of Animal Science, and College of Liberal Arts, Department of Microbiology.
College of Business Administration

C. Warren Neel, Dean
John R. Moore, Associate Dean
Roger L. Jenkins, Associate Dean for Graduate Programs
David A. Hake, Director, Center for Business and Economic Research

Graduate programs of the College of Business Administration are designed to prepare men and women to assume positions in the increasingly complex world of business and industry, teaching and research, and government.

Viewing the business firm as operating in dynamic social, political and economic environments which demand leaders capable of dealing with innovation and rapid change, the College places central importance on development of students' thought processes. Emphasis is focused on flexibility of mind, receptivity to new ideas and capacity to adapt one's reasoning powers. Our objective is to encourage the student to develop the ability to reason analytically and logically. Above all else, we strive to instill the irrepressible desire to continue to learn and grow in knowledge throughout the student's life.

Graduate Programs

The College of Business Administration offers programs leading to six advanced degrees: the Doctor of Business Administration, the Doctor of Philosophy with majors in Economics and in Management Science, the Master of Arts with a major in Economics, the Master of Science with a major in Statistics, the Master of Accountancy, and the Master of Business Administration.

The Department of Management and the Department of Psychology in the College of Liberal Arts jointly offer an intercollegiate program in Industrial and Organizational Psychology leading to the Master of Science and Doctor of Philosophy degrees. (See page 94.) Also, the Department of Management Science offers an intercollegiate program leading to the Master of Science degree. (See page 95.)

The two College-wide programs, the MBA and the DBA, are described below.

Descriptions of other degree programs will be found under the appropriate departmental or program headings.

Academic Common Market. An agreement among southern states for sharing graduate programs allows legal residents of some states to enroll in certain programs at UTK on an in-state tuition basis. Programs in the College of Business Administration available to residents of the states indicated include: DBA (all concentration areas)—West Virginia; MBA (Transportation and Logistics)—Virginia and West Virginia; Industrial and Organizational Psychology (M.S. and Ph.D.)—Alabama, South Carolina, and Virginia. Additional information may be obtained from the Graduate Programs office of this college.

The MBA Program

The MBA program is designed for students with undergraduate degrees in the social and natural sciences, the humanities, and professional fields such as engineering, business, agriculture, and architecture. A full-time student can complete the program in six academic quarters. Those with degrees in business earned at an institution accredited by the American Assembly of Collegiate Schools of Business (AACSB) should be able to complete the program in five quarters.

Full-time students are expected to successfully complete 12 hours per quarter and part-time students 6 hours per quarter. Scheduling and sequencing of courses are done with this assumption in mind.

The complete MBA program with a concentration in management is offered by the regular graduate faculty of the College for part-time students on the Knoxville campus and at Oak Ridge.

The program consists of the MBA core (twelve to nineteen courses depending upon exemptions based on prior studies and/or proficiency examinations) and a concentration/electives block of eight courses. Each course is 3 quarter hours of graduate credit. Thus, the total program may consist of from 60 to 81 quarter hours.

Prerequisites. Upon matriculation, the student must have received a bachelor's degree from a regionally accredited institution.

College level mathematics through at least one course in calculus is the only prerequisite requirement for entry into the program. Those electing the management science or statistics concentration must have completed two years of college level calculus. Those admitted to the accounting concentration should plan on up to two additional quarters for undergraduate prerequisite courses that are taken during the first year of the program. Although not required, completion of undergraduate courses in "math areas" may qualify the student for exemption from some core courses. (See information under "Exemption from Core Courses" on page 34.)

MBA Core. The following courses are required in each student's program unless an exemption from one or more courses is granted as provided below under the heading "Exemption from Core Courses." All courses are 3 credit hours. The core courses are: Accounting 5010, 5020, 5030; Business Administration 5310; Business Law 5010; Economics 5010, 5020, 5030; Finance 5010, 5020; Management Science 5010, 5020; Mathematics 5052; Office Administration 5050; Statistics 5010, 5020.

Concentration and Electives. A concentration area(s) may be indicated on the MBA Program Application or this declaration may be deferred until after matriculation. In any event, selection must be made no later than completion of 27 hours of MBA program course work. In some cases selection of an area(s) early in the program is encouraged to facilitate proper course sequencing. Requests for changes in concentration area(s) must be submitted to the Graduate Business Programs office for approval.

1See notation under the heading "MBA Concentration" in the Management Science Program section (page 41).

2See notation under the heading "MBA Concentration" in the Statistics Department section (page 43).
Among the 8 courses in the concentration/electives block, at least 4 but not more than 6 must be in one of the following concentration areas (for specific courses required in some concentration areas, see departmental sections on following pages): Accounting, Economics, Finance, Forest Industries Management, Government Financial Administration, Management, Management Science, Marketing, Real Estate and Urban Development, Statistics, Transportation and Logistics.

The remaining elective courses (2 to 4) must be in fields outside the concentration area, normally selected from MBA courses offered in other departments of the College, and may comprise a second concentration area of 4 courses. Up to 2 courses (6 hours) in this block may be taken outside the College of Business Administration. No more than 3 courses numbered below 5000 may be included in this 8-course block. Courses numbered below 4000 normally are not approved for the MBA program. Before beginning the concentration/electives part of the curriculum the student must have his/her program approved by the Office of the Graduate Business Dean.

Exemption from Core Courses. A student may be exempted from certain core courses on the basis of having recently completed equivalent undergraduate courses in these subjects with grades of C or higher at a regionally accredited institution. "Recently completed" means, for mathematics, completion of the last course or regular use of math tools within three to four years of matriculation, and for other areas within five to six years of matriculation. Courses in this category (up to the approximate undergraduate equivalent work) are:

- Accounting 5010 (6 quarter hours, fundamentals of financial accounting)
- Business Law 5010 (6 quarter hours, legal and social environment of business)
- Economics 5010 (9 quarter hours, principles of economics—macro and micro)
- Mathematics 5052 (12 quarter hours, including college algebra and calculus. See topics included in Mathematics 5051 and 5052)
- Office Administration 5050 (3 quarter hours, introductory course in computer science with programming)

In addition to the above, a graduate of an AACSB accredited undergraduate business program may request exemption from one or both of the core courses in the area of his/her undergraduate major field, provided at least 30 quarter hours (20 semester hours) of course work were completed in the major area no more than five years prior to matriculation, and a grade average of 3.0 or higher (on a 4.0 scale) was earned for all courses in the major. Students requesting such an exemption must petition the appropriate department head. The department may require the student to pass a proficiency examination over any course for which exemption is requested. (See page 15).

A minimum of 60 quarter hours of graduate credits is required to earn the degree. If a student qualifies for exemption from a course in addition to those provided for in the two categories described above, whether by proficiency examination or otherwise, an additional course approved by the Office of the Graduate Business Dean will be included in the student's curriculum for each such exempted course so as to meet the 60-hour minimum requirement.

Students holding degrees from foreign institutions normally may not be exempted from taking core courses.

Transfer Credits. Graduate level courses taken at other AACSB accredited institutions that otherwise conform to University requirements and meet the minimum degree requirements within the following limits:

- MBA Core: 6 hours
- Concentration Area: 3 hours (provided at least 12 hours of course work at this institution are included in each concentration area)
- Elective Area: 3 hours

The maximum number of hours that may be transferred is 9 quarter hours.

Other Requirements. The Application for Admission to Candidacy (see page 19) must be approved by two faculty members in the student's area of study and the Associate Dean for Graduate Programs in the College of Business Administration, signed by the department head, and submitted to the Graduate Business Dean.

To qualify for the degree, the student must achieve a B average (3.0) or above in MBA core courses required in his/her program, a B average or higher in courses comprising the concentration area(s) and a B average or higher in the overall program. In lieu of passing a written comprehensive examination the student must satisfactorily demonstrate his/her ability to analyze and solve multi-functional problems of the administrative processes and policy determination and to integrate the concepts of the various disciplines embodied in the curriculum of the program. The student is tested in these areas in the courses of the MBA core, particularly in the capstone course, Business Administration 5310—Business Policy, as well as in work required in the concentration areas.

Application and Admission. Applications are accepted to begin the full-time program in the summer quarter for those who have an undergraduate degree in an area other than business and in the fall for students who hold an undergraduate business degree.

There are no admissions for spring or winter quarters. To be considered at admission sessions, the applicant's file must be complete. A completed file includes The Graduate School application, transcripts of prior college work, the MBA program application, the GRE scores and the GMAT score report. The first two items should reach The Graduate School 10 days before the MBA application deadline to allow for internal processing, and the items should reach the Office of the Graduate Business Dean by the deadline date.

For admission to the MBA program, consideration is given to (1) applicant's academic record with particular attention to the last two years of undergraduate work and previous graduate studies, (2) scores on the GMAT and the Test of English as a Foreign Language (TOEFL) for those whose native language is not English, (3) work experience and other activities which demonstrate potential for leadership, and (4) recommendations from professors and work supervisors. The admission decision is based on all factors which make up the total application; therefore, there is no automatic cut-off for either grade point averages or GMAT scores.

Dual J.D.-MBA Program

The College of Business Administration and the College of Law offer a coordinated dual program leading to the conferral of both Doctor of Jurisprudence and Master of Business Administration degrees.

Admissions. Applicants for the J.D.-MBA program must make separate application to, and be competitively and independently accepted by, the College of Law for the J.D. degree and the Graduate School and College of Business Administration for the MBA degree, and by the Dual Degree Committee. Students who have been accepted by both colleges may apply for approval to pursue the dual program anytime prior to, or after, matriculation in either or both colleges. Such approval will be granted, provided that dual program study is begun prior to the last 28 semester hours required for the J.D. degree and the last 24 quarter hours required for the MBA degree.

Curriculum. A dual program candidate must satisfy the degree requirements of each college. Students withdrawing from the dual program before completion of both degrees will not receive credit toward graduation from either college for courses in the other college, except as such courses qualify for credit without regard to the dual program.

The College of Law will award up to 8 semester hours of J.D. degree for acceptable performance in a maximum of 12 quarter hours of approved graduate level courses offered by the College of Business Administration. Three of the 12 quarter hours must be earned in Accounting 5030 or a more advanced accounting course. If College of Law credit is given for such an accounting course, the student may not receive credit for College of Law course 8590—Legal Accounting.

The College of Business Administration will award up to 12 quarter hours of credit toward the MBA degree for acceptable performance
The DBA Program

The basic objective of the Doctor of Business Administration program is to provide the student with the intellectual competence necessary to meet the highest standards for advancement to a professional position in an academic institution, business and industry, or government. The student will develop a sound foundation for expanding knowledge in the student's chosen area of concentration and will contribute through research to advancement of the state of knowledge in this area. Moreover, the student's educational experience should develop perspective toward education for business in a manner that will enable the student to spearhead research and development as needed.

The DBA program is structured around four major features. First, it recognizes the interdisciplinary thrust of graduate education and provides the student with a sound foundation for expanding the body of knowledge related to business systems and their interactions with other socioeconomic systems and environmental forces. Second, the student's program is flexible enough to respond to individual needs and interests yet is formulated within a sound framework to achieve overall objectives. Third, emphasis is placed upon conceptual foundations and analysis of decision-making processes rather than descriptive aspects of business administration. Fourth, the student does advanced work in the basic disciplines of economic theory, behavioral science and quantitative methods to provide the necessary foundations for research.

Foundation Requirements. Although the program is designed for students who have completed an accredited MBA (or equivalent) degree program, those with outstanding undergraduate records in any area may be admitted directly to the DBA program and may, if they desire, earn the MBA degree in a coordinated program of study. Program prerequisites include at least one year of college mathematics to include a course in calculus, a course in statistics, knowledge of computer programming, and intermediate economic theory (micro and macro). See page 33 for MBA degree requirements. Entering students deficient in any of these areas may enroll in courses designed to meet these requirements.

Course Requirements for the DBA Program. Each student must demonstrate, by passing appropriate graduate level courses and/or by examination, an understanding of the business functional areas, the basic disciplines underlying the study of business administration, the student's concentration area and a supporting area. Following are the requirements for each area:

A. Business Functional Areas. One graduate level course in each of the following areas must be completed: managerial accounting, financial management, marketing management, organization theory and behavior, and business policy. Students who have earned a B grade or better in an accredited institution probably will have met these requirements. Others may include appropriate courses in their programs as approved by their academic advisor.

B. Basic Disciplines. Each student must demonstrate proficiency in the following areas by completing course work indicated or by passing appropriate examinations:

- Economics: Economics 5110, 5120.
- Behavioral Science: Management 5610, 5620.
- Quantitative Science: 12 quarter hours in one or a combination of two of the following areas: statistics, econometrics, or computer science. Approval of student's committee is required.

C. Concentration Area. This is the focal point of the program and the area in which the student expects to do his/her research and dissertation. A minimum of 24 quarter hours of course work is required, including 9 hours of doctoral seminars taken at this University. A study of research methodology of the discipline is a part of the work in the field taken at other institutions is considered by the student's committee in determining additional course work required. Available concentration areas are:

- Accounting
- Finance
- Management
- Marketing
- Transportation and Logistics

D. Supporting Area. A minimum of 12 quarter hours of graduate course work is required in an area outside, but complementary to, the concentration area. The student may choose the supporting area from one of the following: one of the business functional areas, additional work in one of the basic disciplines or a related area in another school or college of the University. The program of study should be arranged with an advisor in the discipline chosen and must be approved by the student's committee.

Comprehensive Examinations. Comprehensive written examinations over the concentration and supporting areas are required of each person seeking candidacy for the DBA degree. The concentration area examination is administered in two sessions of approximately four hours each and the supporting area examination in one session of approximately four hours. The examining committee may, if it deems advisable, supplement the written examinations with oral examinations and may accept the results of only an oral examination for a supporting area in the College of Law. Scheduling of comprehensive examinations will be determined by the examining committee in each of the five concentration areas in coordination with the Associate Dean for Graduate Programs. The committee must designate two periods during the calendar year and announce the dates at least 90 days in advance. A student may sit for examinations in both areas at one examining period or take them in two consecutive periods. A student who fails an examination on the first attempt must repeat the examination over that area at the next examining period, the results of which shall be final.

Admission to Candidacy. A student may apply for admission to the DBA degree after maintenance of at least a B average in course work, successful completion of comprehensive examinations and acceptance of a research proposal for the dissertation by his/her faculty committee. Admission to candidacy must be approved at least three quarters prior to the date the degree is conferred. (Admission in the fall quarter permits graduation in the following spring quarter.) See sections headed "Doctoral Committee" and "Admission to Candidacy," page 20.

Application for Admission to Candidacy must include a listing of all courses taken in each of the fields required for the degree (business functional areas, basic disciplines, concentration area and supporting area). Graduate courses accepted from other institutions must be approved by the student's faculty committee. "Doctoral Committee Requirements" indicate date of acceptance of the research proposal by the Faculty committee. The application must be approved by the student's faculty committee and the Associate Dean for Graduate Programs in the College of Business Administration before submission to the Graduate Office.

Research and Dissertation (minimum of 36 quarter hours). The purpose of the segment is to provide the candidate with a research experience that meets the general standards of the profession. The dissertation is supervised by the candidate's faculty committee, who must certify its completion and acceptability and present the candidate's oral defense of his/her research effort.

Other Requirements. For information concerning program admission requirements, academic performance standards, fellowships and assistantships, and general rules and regulations of The Graduate School, see other parts of the College of Business Administration section and the first section of the catalog, "The Graduate School," also see "Academic Common Market," page 13.
Minimum Academic Performance Standards

A graduate student in the College of Business Administration whose grade point average at any point after 12 hours is below 3.0 shall be placed on probation. A student on probation shall be dropped from the program unless his/her grade point average is 3.0 or higher at the end of the probationary period. The probationary period is defined as the next 12 quarter hours of course work attempted which is specified in the student's degree program. Exceptions to this policy may be made only with the approval of the Associate Dean for Graduate Programs of the College of Business Administration upon recommendation of the student's faculty committee.

Admission Requirements

General admission requirements for The Graduate School are stated on pages 10-11. M.Acc., MBA, and DBA applicants are required to take the Graduate Management Admission Test (GMAT). Applicants for programs in economics, management science, and statistics may submit results of either the GMAT or the Graduate Record Examination (GRE) aptitude portion. Applicants for management science and statistics programs must have completed at least two years of college level calculus and be proficient in a computer language. Applicants whose native language is other than English must submit results of the Test of English as a Foreign Language (TOEFL). Scheduled dates and locations for taking these examinations may be obtained from Educational Testing Service, P.O. Box 966, Princeton, New Jersey 08540, and from most colleges and universities.

In addition to procedures required for admission to The Graduate School (pages 10-11), M.Acc., MBA and DBA applicants must submit additional information on forms provided by the College of Business Administration for all programs and supporting materials should be submitted at least three months prior to desired entry date.

The College of Business Administration is fully accredited by the American Assembly of Collegiate Schools of Business and is associated with other leading graduate schools of business as a member of the Graduate Management Admission Council.

Fellowships and Assistantships

Fellowships. Information concerning nonservice fellowships administered by The Graduate School as well as application blanks may be obtained from the Graduate Office. Information on College-administered fellowships is available from the Office of the Graduate Business Dean in the College of Business Administration.

Assistantships. A limited number of teaching assistantships and assistantships that require from 10 to 20 hours of service per week are available through the departments of the College. Remuneration includes payment of fees and out-of-state tuition as well as monthly stipend. Applications are generally made on the basis of scholarship and performance on the admission test. Application forms may be obtained in any of the departments or from the office of the Associate Dean for Graduate Programs. Applications must be received by March 1 for consideration of assistantships and fellowships to be awarded for the following fall term.

Center for Business and Economic Research

The staff of the Center for Business and Economic Research engages in studies of the business and economic environment in Tennessee, the Southeast, and the nation. The Center serves the business community, state government, individuals, and the University through dissemination of various kinds of economic and socioeconomic information and supports the faculty of the College in seeking funding for research projects. Staff members conduct research in regional economic development, public finance, and areas related to socioeconomic problems in the region. The Center publishes the results of its own research and that of others in monograph form so that significant developments in the various business disciplines and economics can achieve widespread exposure. In addition, the Center staff does contract research on business and economic problems for governmental organizations and private industry. The Center publishes periodically the Tennessee Statistical Abstract and quarterly the Survey of Business. The Center is a member of the Association for University Business and Economic Research.

Management Development Programs

The Management Development Programs Department offers a wide variety of programs ranging from two- to three-day public seminars and customized "in-plant" programs to the four-week Tennessee Executive Development Program.

The Tennessee Executive Development Program (TEDP) is designed to provide extensive continuing educational opportunities for executives from firms and organizations in Tennessee, the South, and the nation. The major objective of the program is to prepare and develop executives for increasingly higher levels of management responsibility and to sharpen existing executive skills needed for comprehensive decision making and leadership. Other major aims of the TEDP are to teach the fundamentals of analytical thinking and the use of the decision tools, and to examine the economic, political, technological and other environmental factors affecting the firm's operations.

The TEDP limits enrollment to forty participants who live on campus for a total of four weeks spread over a three-month period. This arrangement provides executives with extensive opportunities to exchange ideas and operational concepts with contemporaries in other business areas and with TEDP faculty as well.

The faculty for the TEDP consists of senior professors who teach business-related subjects in the University's graduate programs and nationally recognized professors of other institutions. Each participating faculty member has extensive experience in either collaboration with or actual operation in business and industry. The TEDP faculty is augmented by outstanding practitioners in their fields of business and industry.

Departments of Instruction

Accounting and Business Law

J. E. Kiger (Head), Ph.D. Missouri, C.P.A.

Accounting

MAJOR

DEGREE

Accounting

M. Acc.

Professors:


J. R. Williams, Ph.D. Arkansas, C.P.A.

Associate Professors:

H. C. Herring, Jr., Ph.D. Alabama, C.P.A.;

I. A. Posey, M.S. Tennessee, C.P.A.;

J. H. Scheiner, Ph.D. Ohio State, C.P.A.;

W. L. Slagle, M.S. Tennessee, C.P.A.;

R. L. Townsend, Ph.D. Texas, C.P.A.

Assistant Professors:

C. D. Izard, Ph.D. Mississippi, C.P.A.;

M. C. Leisinger, M.S. Tennessee, C.P.A.;

J. M. Reeve, Ph.D. Oklahoma State, C.P.A.;

H. P. Roth, Ph.D. Virginia Polytechnic Institute, C.P.A.;

M. G. Tiller, D.B.A Indiana.

Distinguished Lecturer:

S. B. Wolfe, B.S. Virginia Polytechnic Institute.

THE MASTER OF ACCOUNTANCY PROGRAM

The objective of the Master of Accounting (M.Acc.) program is to provide persons having an undergraduate accounting background and a high level of knowledge or experience with the depth and understanding of accounting which will enhance their probability of success in a career in professional accounting. Moreover, the student's educational experience should develop perspective toward the discipline of accounting in a manner that will enable the student to spearhead innovation and change in response to needs in public accounting, business organizations and government.
complete courses in selected business disciplines and in the area of accounting as indicated below. Each course is 3 quarter hours of graduate credit.

Business Core (21 quarter hours):1

Economics 5030, Finance 5420, Mathematics 5052 and 4 additional courses from the following areas, subject to approval of the program advisor (no more than one course may be taken in any one area): Business Policy, Business Law, Computer Science, Economics, Management, Management Science, Marketing, Finance, Statistics, and Transportation.

Accounting Core (15 quarter hours): Accounting 5110, 5120, 5210, 5420, 5950. Accounting Electives (select 12 quarter hours):2 Accounting 5130, 5140, 5160, 5220, 5420, 5440, 5510, 5640, 5950.

Other Requirements. To qualify for the degree, the student must achieve a B average (3.0) in the business core courses and also a B average in the accounting courses. Each student must pass a final written examination during the final quarter of study for the degree.

MBA Concentration: Accounting

Minimum Course Requirements for MBA Concentration: Accounting 5110, 5120, 5210, 5420, and two of the following: 5320, 5330, 5340.

All Master of Business Administration students who elect a concentration other than Accounting are required to take a minimum of 6 quarter hours of graduate level accounting in addition to Accounting 5010 or its equivalent. In those instances where Accounting 5020 and/or 5030 would result in substantial duplication of accounting work previously taken, the student shall not be permitted to earn credit in those courses, but must select an equivalent number of graduate accounting hours in lieu thereof. Recommended courses include: Accounting 5110, 5120, 5130, 5220, 5420, 5510, and 5640.

5002 Non-Thesis Graduation Completion (3-15) Required for the non-thesis student not otherwise registered during any quarter when such a student uses university facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E

5010 Financial Accounting (3) Introduction to accounting theory and procedures. Not available to students with credit for 4010. Prereq: 3120 with C or higher; 3430 with C or higher.

5300 Managerial Accounting (3) Analysis of uses and limitations of accounting model of firm. Emphasis on internal and external uses of general purpose financial reports. Prereq: 5010 or equivalent. F, W

5303 Managerial Accounting (3) Analysis of accounting model of firm as vehicle for planning and controlling activities. Attention to development of cost data appropriate to managerial decision models. Prereq: 5020; Economics 5010. W, Sp

5110 Seminar in Accounting Theory (3) Evolution of accounting theory, concepts underlying financial reporting models, and authoritative accounting literature and measurement of periods, performance and financial position. Prereq: Consent of department head. May not be taken by students with credit for 4400.

5120 Seminar in Advanced Auditing (3) Theory and concepts underlying the philosophy of auditing as related to current auditing issues. Prereq: 4120 or equivalent.

5130 Selected Topics—Current Accounting Practice (3) Critical in-depth consideration of selected financial reporting topics of particular relevance to current auditing practice. Prereq: 5110.

5140 Selected Topics—Current Accounting Theory (3) Critical in-depth consideration of current issues in the financial accounting literature. Prereq: 5110.

5160 Graduate Internship in Accounting (3) Full-time resident professional employment for one academic quarter involving qualified job experience, written report of responsibilities, and evaluation of student performance. Prereq: Consent of instructor.

5210 Seminar in Advanced Managerial Cost Accounting (3) Development of expertise in managerial cost accounting, including current issues impacting on development and practice of managerial cost accounting. Cost allocation, planning, and control, analysis of uncertainty, and responsibility accounting concepts. Prereq: 3230 or consent of instructor.

5220 Budgetary Planning and Control Systems (3) Alternative approaches to organizing and planning for control. Development of planning models to meet organization's needs and objectives. Control systems and corporate structure, discretionary expense centers, profit centers, investment centers, transfer pricing, and control in for-profit organizations. Prereq: 5320 or 5030.

5310 Auditing Concepts (3) Concepts and theory of auditing, environment of internal and external auditing, nature of evidence, internal control evaluation, and reporting. Not intended for persons who have credit for auditing course. Prereq: 5310. Prereq or coreq: Statistics 4415 or equivalent.

5320 Advanced Auditing (3) Case-oriented, including audit of specific asset, liability, revenue and expense accounts. Emphasis on reporting, data processing, statistical sampling, and internal auditing. Prereq: 4110 with C or better. (Available only to MBA students who do not have credit for 4120.)

5330 Advanced Income Tax (3) Federal income taxation law and practice, current issues and research. Prereq: 3120 with C or higher; 3430 with C or higher. (Available only to MBA students who do not have credit for 4430.)

5340 Consolidations and Business Combinations (3) Analysis of accounting for interrelated business entities—domestic and foreign. Not intended for persons who have credit for a course with Prereq: 5310.

5420 Tax Research (3) Development of expertise in tax research utilizing tax service, tax periodicals, legal cases and other available sources. Includes individual research projects. Prereq: 4430 or equivalent.

5430 Tax Planning (3) Advanced study of income tax planning emphasizing alternatives available to minimize tax liability compatible with achieving taxpayer objectives. Prereq: 5420.

5440 Taxation of Estates and Gifts (3) Transfers at death, inter vivos transfers, life insurance, annuities and employee death benefits, marital and other deductions and exemptions, and estate and gift tax returns. Prereq: 4430. (Not available to students with credit for 4440.)

5450 Taxation of Partnerships and Partnerships (3) Formation, operation, termination, and liquidation and other special problems of partnerships. Prereq: 5420.

5460 Taxation of Corporations and Shareholders (3) Organization and structure, distributions, liquidations, reorganizations and special problems including Subchapter S Corporations and Personal Holding Companies. Prereq: 5420.

5490 Tax Policy (3) Current policies explored through historical development and current status of various types of taxes and American taxing jurisdictions; directed research in selected topics. Prereq: 5430, 5450, 5460.

5510 Not-for-Profit Accounting (3) Theory and practice of budgetary and fund accounting, financial reporting, measurement of period and current funds, presentation, and financial and performance auditing for nonprofit entities. Prereq: 9 hrs of accounting and consent of instructor.

5630 Accounting Systems and ED P Concepts and Control (3) Elements and operation of computer in business environment. Analysis, design, implementation, documentation, and control of accounting systems. Prereq: 2130 and knowledge of a computer programming language.

5640 Seminar in Accounting Information Systems (3) Literature on accounting information systems and advanced systems analysis and design concepts. Informational needs of other functional areas of business and interfacing of these areas. Prereq: 4630 or equivalent.

5910-20-30 Accounting Seminar (1, 1, 1) Research and discussion of special topics of interest in practice of accounting. May be repeated. Admission by consent of department head. S/NC only.

5950 Seminar in Accounting Research (3) Integra- tion of theories of financial accounting, analysis, and research, including directed problem-oriented research in selected topics. Prereq: 5110, 5120, 5210, 5420. (Not available to non-thesis M.B.A. students.)

5990 Individual Research in Accounting (3) Directed research in a topic of mutual interest to student and faculty member. Prereq: Consent of depart- ment head in quarter prior to anticipated enrollment. May be repeated. Maximum 6 hrs.

6000 Doctoral Research and Dissertation (3-15) P/PN only. E

6110-20-30 Doctoral Seminar in Accounting (3, 3, 3) Analysis of issues reflected in accounting literature. Prereq: 9 hrs of graduate credit in accounting and consent of instructor.

Business Administration

5010 Legal and Social Environment of Business (3) Basic concepts and knowledge of the legal environment with emphasis on those which have particular significance to business; basic legal notions and principles that pertain to business management. Not available to students with credit for 4110-20 or equivalent. F, W, Su

5130 Administrative Regulation of Business (3) Federal Register System and Administrative Procedure Act and their relationship to business. How a regulation is made and enforced. Other legal controls of administrative agencies. Not available to students with credit for 4110-20 or equivalent. F, W, Su

Business Administration

Degree: MA, MBA

5310 Business Policy (3) Case studies covering policy formulation and implementation, point of departure—top and middle management, where company-wide objectives are set and departmental policies and activities coordinated; analyzing company's situation, determining objectives, developing sound policies and procedures, and analyzing personnel to reach company objectives, continuous administrat- 

Business Administration

Degree: MA, MBA

5310 Business Policy (3) Case studies covering policy formulation and implementation, point of departure—top and middle management, where company-wide objectives are set and departmental policies and activities coordinated; analyzing company's situation, determining objectives, developing sound policies and procedures, and analyzing personnel to reach company objectives, continuous administrat-
5410 Business and Its Societal Environment (3) Analysis of current forces and changes in society and interrelation of plans and actions in business firms with environmental factors. Prereq: Consent of instructor.

5610 Seminar in Applied Business Analysis (3) Application of business concepts and analytical skills to problems of small businesses in community. Students electing the non-thesis department, combining two or three of the above.

5810 Seminar in Applied Business Analysis (3) Application of business concepts and analytical skills to problems of small businesses in community. Students electing the non-thesis department, combining two or three of the above.

5010 Introduction to Economic Analysis (3) Analytical tools of macro- and microeconomics for students without prior training in economics. Price determination, national income measurement and determination, and banking system. Not available to students with credit for 2110-20-30 or equivalent. F

5211 Macroeconomic Theory (3) Theory of consumer behavior and demand; theory of production and cost; long and short run theories of profit maximizing firm in both perfectly competitive and monopolistic environments; theory of derived demand and factor pricing; introduction to welfare economics, capital theory. Should be taken in consecutive quarters. Prereq: 3111 or equivalent. F/W

5212 Macroeconomic Theory I, II (3, 3) Theory of consumer choices and demand; theory of the firm; theory of production and costs; market structures; derived demand and factor pricing; introduction to welfare economics, capital theory. Should be taken in consecutive quarters. Prereq: 3111 or equivalent. F/W

5213 Microeconomic Theory I, II (3, 3) Theory of consumer choices and demand; theory of the firm; theory of production and costs; market structures; derived demand and factor pricing; introduction to welfare economics, capital theory. Should be taken in consecutive quarters. Prereq: 3111 or equivalent. F/W

5214 Microeconomic Theory I, II (3, 3) Theory of consumer choices and demand; theory of the firm; theory of production and costs; market structures; derived demand and factor pricing; introduction to welfare economics, capital theory. Should be taken in consecutive quarters. Prereq: 3111 or equivalent. F/W

5215 History of Economic Thought (3) Development of economic ideas from mercantilists through Alfred Marshall; emphasis given to classical and neoclassical tradition.

5216-90 Mathematical Methods in Economics (3, 3) Applications of basic concepts in differential and integral calculus, difference and differential equations, linear algebra and stochastic models to topics in theory of firm, growth models, game theory, linear programming, and decision making under uncertainty. Prereq: 1 yr of calculus. Sp

5217-90 Mathematical Methods in Economics (3, 3) Applications of basic concepts in differential and integral calculus, difference and differential equations, linear algebra and stochastic models to topics in theory of firm, growth models, game theory, linear programming, and decision making under uncertainty. Prereq: 1 yr of calculus. Sp

5218-90 Mathematical Methods in Economics (3, 3) Applications of basic concepts in differential and integral calculus, difference and differential equations, linear algebra and stochastic models to topics in theory of firm, growth models, game theory, linear programming, and decision making under uncertainty. Prereq: 1 yr of calculus. Sp

5219-90 Mathematical Methods in Economics (3, 3) Applications of basic concepts in differential and integral calculus, difference and differential equations, linear algebra and stochastic models to topics in theory of firm, growth models, game theory, linear programming, and decision making under uncertainty. Prereq: 1 yr of calculus. Sp

5220-90 Mathematical Methods in Economics (3, 3) Applications of basic concepts in differential and integral calculus, difference and differential equations, linear algebra and stochastic models to topics in theory of firm, growth models, game theory, linear programming, and decision making under uncertainty. Prereq: 1 yr of calculus. Sp
cycles, macroeconomic applications. Should not be taken by students who contemplate taking Econom- ics 6170-80-90. Sp
5810 Financial Markets and Intermediaries (3) (Same as Finance 5610.) W
5830 Commercial Bank Management (3) (Same as Finance 6890.) F
6111 Advanced Microeconomic Theory (3) Consent of instructor. Prereq: 21 hrs of economics and microeconomic theory. F
6121 Advanced Macroeconomic Theory (3) Topics in macroeconomic theory and policy. Prereq: 5122 or equivalent. W
6150-60 History of Economic Doctrines (3, 3) Important ideas of economic thinkers from Middle Ages to present. W, Sp
ECONOMICS OF CENTRALLY PLANNED ECONOMIES
5310 Economic Systems (3) Study and appraisal of underlying theories and operation of capitalism, socialism, communism, and other economic systems. W
6331 Theory and Practice of Economic Planning (3) Leading issues in imperative and indicative planning. Prereq: Consent of instructor. May be repeated with consent of department. F
ECONOMICS OF LABOR AND HUMAN RESOURCES
4420 Economics of Human Resources (3) Analysis of current problems in human resource development and examination of policies aimed at their solutions. Prereq: 3410.
4430-40 Labor Law (3, 3) Relationship of labor law to effectiveness of collective bargaining. W
5260 Methods of Regional Analysis (3) Theory of regional structure and growth. Examination of regional models for impact analysis and economic forecasting. Methods of analysis include regional descriptive statistics, gravity and potential concepts, regional income and product accounts, shift and share analyses, economic base studies, and regional input-output, linear programming, and econometric models. W
5261 International Economics: Trade (4) Pure theory of classical, neoclassical, and modern international trade. Comparative advantage, free trade and welfare, and technological change, growth and migration, tariffs and subsidies, and customs unions. Prereq: 5112 or consent of instructor.
5263 International Monetary Economics (4) Theory of capital flow and determination, and approaches to balance of payments theory, balance of payments adjustment under alternative exchange rate regimes, economic policy in open economy, international capital movements. Prereq: 5121, 5030, 5120 or consent of instructor.
5261 International Economics: Trade (4) Pure theory of classical, neoclassical, and modern international trade. Comparative advantage, free trade and welfare, and technological change, growth and migration, tariffs and subsidies, and customs unions. Prereq: 5112 or consent of instructor.
5263 International Monetary Economics (4) Theory of capital flow and determination, and approaches to balance of payments theory, balance of payments adjustment under alternative exchange rate regimes, economic policy in open economy, international capital movements. Prereq: 5121, 5030, 5120 or consent of instructor.
5261 International Economics: Trade (4) Pure theory of classical, neoclassical, and modern international trade. Comparative advantage, free trade and welfare, and technological change, growth and migration, tariffs and subsidies, and customs unions. Prereq: 5112 or consent of instructor.
5263 International Monetary Economics (4) Theory of capital flow and determination, and approaches to balance of payments theory, balance of payments adjustment under alternative exchange rate regimes, economic policy in open economy, international capital movements. Prereq: 5121, 5030, 5120 or consent of instructor.
5261 International Economics: Trade (4) Pure theory of classical, neoclassical, and modern international trade. Comparative advantage, free trade and welfare, and technological change, growth and migration, tariffs and subsidies, and customs unions. Prereq: 5112 or consent of instructor.
5263 International Monetary Economics (4) Theory of capital flow and determination, and approaches to balance of payments theory, balance of payments adjustment under alternative exchange rate regimes, economic policy in open economy, international capital movements. Prereq: 5121, 5030, 5120 or consent of instructor.
5261 International Economics: Trade (4) Pure theory of classical, neoclassical, and modern international trade. Comparative advantage, free trade and welfare, and technological change, growth and migration, tariffs and subsidies, and customs unions. Prereq: 5112 or consent of instructor.
5263 International Monetary Economics (4) Theory of capital flow and determination, and approaches to balance of payments theory, balance of payments adjustment under alternative exchange rate regimes, economic policy in open economy, international capital movements. Prereq: 5121, 5030, 5120 or consent of instructor.
5261 International Economics: Trade (4) Pure theory of classical, neoclassical, and modern international trade. Comparative advantage, free trade and welfare, and technological change, growth and migration, tariffs and subsidies, and customs unions. Prereq: 5112 or consent of instructor.
5263 International Monetary Economics (4) Theory of capital flow and determination, and approaches to balance of payments theory, balance of payments adjustment under alternative exchange rate regimes, economic policy in open economy, international capital movements. Prereq: 5121, 5030, 5120 or consent of instructor.
5261 International Economics: Trade (4) Pure theory of classical, neoclassical, and modern international trade. Comparative advantage, free trade and welfare, and technological change, growth and migration, tariffs and subsidies, and customs unions. Prereq: 5112 or consent of instructor.
5263 International Monetary Economics (4) Theory of capital flow and determination, and approaches to balance of payments theory, balance of payments adjustment under alternative exchange rate regimes, economic policy in open economy, international capital movements. Prereq: 5121, 5030, 5120 or consent of instructor.
5261 International Economics: Trade (4) Pure theory of classical, neoclassical, and modern international trade. Comparative advantage, free trade and welfare, and technological change, growth and migration, tariffs and subsidies, and customs unions. Prereq: 5112 or consent of instructor.
5263 International Monetary Economics (4) Theory of capital flow and determination, and approaches to balance of payments theory, balance of payments adjustment under alternative exchange rate regimes, economic policy in open economy, international capital movements. Prereq: 5121, 5030, 5120 or consent of instructor.
5261 International Economics: Trade (4) Pure theory of classical, neoclassical, and modern international trade. Comparative advantage, free trade and welfare, and technological change, growth and migration, tariffs and subsidies, and customs unions. Prereq: 5112 or consent of instructor.
5262 International Economics: Commercial Policy (4) Determinants of commodity composition of trade, protection arguments, economic costs and conse-
MBA Concentrations: Finance, Governmental Financial Administration, Real Estate and Urban Development.

DBA Concentration: Finance

Minimum Course Requirements for MBA Concentrations: Finance—For the Finance Management Courses: 5120, 5130, 5140; for the Banking and Financial Institutions area: 5420, 5430, 5440; for the Urban Development area: 5810, 5820, 5830.

Governmental Financial Administration—5710, 5720, 5730, 5740. Real Estate and Urban Development—Real Estate 5110, 5120, 5130, 5140.

5002 Non-Thesis Graduate Completion (3-15) Required for the non-thesis student not otherwise registered during any quarter when such a student uses university facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E


5000 Doctoral Research and Dissertation (3-15) P/NP only. E

FINANCIAL AND INVESTMENTS

5101 Financial Management and Asset Valuation (3) Analysis of decision making in financial management. Processes by which a firm is valued; roles of investors, financial markets, instruments, risk and expected return. Capital budgeting process with respect to identifying relevant variables, understanding alternative capital budgeting tools, decision rules and decision-making criteria. Capital budgeting decision evaluation under conditions of uncertainty. Alternative risk methods. Prereq: Economics 5010; Statistics 5010. Prereq or coreq: Accounting 5020. W, Sp


5120 Quantitative Techniques In Financial Management (3) Applications of mathematics, probability, and statistics to model building and testing in finance. Prereq: 5020; Statistics 5010, F, W

5130 Financial Administration (3) Cases and readings within firm; refined techniques of analysis: optimal financing decisions; capital cost measurement; utilization of capital markets; general corporate finance theory. Prereq: 5020, W, Sp

5140 Corporate Management Simulation (3) Application of functional areas and strategic concepts to current business problems. May be repeated. Maximum 6 hrs. S/NC or letter grade. E

5140-20-30 Production Management (3, 3, 3) Introduction to basic management principles and controlling with emphasis on corporate strategic planning. Sp

5140 Corporate Management Simulation (3) Application of functional areas and strategic concepts to current business problems. May be repeated. Maximum 6 hrs. S/NC or letter grade. E

5200 Wage and Salary Administration (3) Analysis of problems, programs, and practices. W

5230 Human Problems in Administration (3) Review of research, critique of literature, and practical tips in human relation problems. (Same as Psychology 5450.) W

5250-60 Industrial and Organizational Psychology (1-3, 1-3) Readings in industrial and organizational psychology. Available only by prearrangement with supervising faculty member. May be repeated. Maximum 6 hrs. S/NC or letter grade. E

5260 Independent Study, Project or Research in Management (1-3) Topic of mutual interest to the student and faculty member. Available only by prearrangement with supervising faculty member. May be repeated. Maximum 6 hrs. S/NC or letter grade. E

5320 Management Problems in Industrial Research (3) Basic administrative problems encountered in management of industrial technological research and engineering programs, and comparable programs in which professional personnel predominate. F, A

5410-20-30 Production Management (3, 3, 3) Quantitative approach to solution of production management problems. Prereq: 5620 or consent of instructor. F

5610-20 Organizational Behavior (3, 3) Behavioral methodology and perspective, including review of empirical behavioral research in organizations. Must be taken in sequence. F

5630 Research Methods in Management (3) Methodological issues in management research. Review of experimental design, measurement problems, data sources and collection, and application of statistical methods, followed by critique of student
research proposals. Prereq: DBA student status or consent of instructor. S/NC only. Sp

5810 Energy Management: Theory and Practice (3) Management of energy issues in operating systems; decision criteria, trade-offs, system analysis, energy audits, technical parameters, conservation, design, and the energy supply and demand, new energy technologies.

6000 Doctoral Research and Dissertation (3-15) P/NP only. E

6110 History of Management Thought (3) Significant historical ideas leading to present state of art of management.

6120 Advanced Organizational Theory (3) Analysis of functioning of complex organizations: structure, culture, and adaptation.

6130 Seminar in Contemporary Management Issues (3) Contemporary management policy issues. May be repeated.

6250-60-70 Seminar in Industrial and Organizational Psychology (3, 3, 3) Advanced problems in organizational psychology. Areas include performance, motivation, group development, group process, and morale. (Same as Psychology 6250-60-70.)

6380 Seminar in Industrial and Organizational Psychology (3) (Same as Psychology 6380.)

6980 Field Work in Industrial and Organizational Psychology (1-18) Supervised practice. One credit hr for each 30 hrs of such practice. Maximum 15 credits. (Same as Psychology 6980.) E

Management Science

MAJOR

 Management Science

DEGREE

Ph.D.

Professor:

R. S. Garlikin (Chairperson), Ph.D. Johns Hopkins.

Associate Professors:

J. K. Ho, Ph.D. Stanford; R. E. Rosenthal, Ph.D. Georgia Institute of Technology.

Management Science Committee:

Members of the Management Science faculty and in addition: R. W. Boiling, Management; J. S. Bradley, Management; E. Gluskin Economics; W. J. Morse, Accounting; R. E. Shriever, Finance; C. C. Thigpen, Statistics; K. Gilbert, Computer Science.

K. G. Gilbert, Management Science

MBA CONCENTRATIONS

For students whose MBA concentration area is Management Science, the MBA Core is revised as follows: substitute Management Science 5310 for 5010, and with approval of student's advisor, substitute Statistics 5120 for 5020. The concentration area must include Management Science 5330 and 5340.

MASTER OF SCIENCE PROGRAM

See page 95 for details of the Master of Science program in Management Science.

THE DOCTORAL PROGRAM

The Ph.D. program in Management Science is designed to prepare students for management positions, research, and teaching related to the application of mathematical tools in the administration of complex organizations. Three primary objectives of the program are:

1. To provide advanced knowledge of management science course work, a thorough knowledge of common Management Science/Operations Research mathematical models and their uses;

2. To provide sufficient advanced study in a supporting area to qualify the graduate for a joint faculty position in the supporting area and management science. The candidate may choose from the business functional areas (accounting, finance, marketing, production management, and transportation and logistics) or other advanced disciplines, (e.g., computer science, statistics, forestry, ecology, and public administration);

3. To develop in the student, through course work in management science methods, and computer science, a high degree of mathematical maturity which will serve the graduate well throughout a life-long career, whether in management, research, or teaching.

Degree Requirements: The minimum course and diversity requirements for the doctoral degree are stated on page 19.

Course work. A minimum of 72 quarter hours of course work taken for graduate credit (exclusive of thesis or dissertation) is required. The candidate must complete a minimum of 36 quarter hours at The University of Tennessee, Knoxville, at least 9 of which must be at the 6000 level. Entering students who have completed graduate work in applicable fields will be granted course credits for which work is equivalent to required courses in the program.

The program is divided into approximately 24 to 30 quarter hours of course work in the applied concentration area.

Qualifying Examinations. The student must demonstrate mastery of probability theory and statistical inference (Statistics 5110-20-30) by passing a written qualifying examination. Mastery of 18 to 21 quarter hours in mathematics coursework must be demonstrated by passing a written qualifying examination in undergraduate mathematics (either Mathematics 4225, 4245, 4060 and 5655, or Mathematics 5655-65-75) and real analysis (Mathematics 4510-20-30). Other options may be approved. In exceptional circumstances the faculty will consider waiving the mathematics and/or statistics qualifying examinations.

There is no foreign language requirement.

The student must complete 36 quarter hours of course work, normally completed by the end of the first year of the program.

Comprehensive Examination. Prior to admission to candidacy for the degree, and normally after completion of the second year of the program, the student must pass a written comprehensive examination covering the theory of deterministic and stochastic management science models. Topics included in this examination are determined on an individual basis. Students will be expected to demonstrate an integrative ability that goes beyond simple mastery of course content.

Research and Dissertation. The student must complete 90 quarter hours of Management Science 6000, Doctoral Research and Dissertation, through which he/she is expected to make a significant contribution to the theory or practice of management science. A final oral examination is conducted over the dissertation and such other segments of the program that the faculty committee deems appropriate. This effort, which is beyond the minimum 72 hours of course work, normally is completed in the third year of the program.

Prerequisites for Management Science Courses. The Management Science Program is interdisciplinary and students in other degree programs are encouraged to enroll in management science courses. Course prerequisites are designed to indicate the level at which which courses are taught. Interested students whose prior course work does not match the prerequisites are encouraged to seek the instructor's guidance and consent to enroll.

5000 Thesis (1-15) P/NP only. E

5002 Non-Thesis Graduation Completion (3-16) Required for the non-thesis student not otherwise registered during any quarter when such a student uses university facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E

5100 Quantitative Analysis for Management Decisions (3) Assignment, transportation and general linear programming problems; decision theory, Markov chains and queueing, Prereq or coreq: Statistics 5101. May not be taken for credit by students who receive credit for 5310. W, Sp.

5110-20-30 Management Science Methods (3, 3, 3) Statistical methods, principles and applications such as linear programming, simulation, queueing models. Prereq: Statistics 5110 or Mathematics 4750-60 or Mathematics 4850: proficiency in a computer language. F; W; Sp

5335 Mathematical Programming Computational Systems (2) Practical aspects of using state-of-the-art mathematical programming systems. Students will write computer programs and report writing software for specific applications. Sp

5340 Application of Management Science Methods (3) Application of methods from 5310-20-30 to large-scale management science problems. 5330 may be taken concurrently. Su

5810 Special Topics in Management Science (3) Prereq: Consent of instructor. May be repeated. Maximum 9 hrs.

5910 Management Science Problems (1-6) Directed study on subject of mutual interest to student and staff member. E

6000 Doctoral Research and Dissertation (3-15) P/NP only. E

6110-20-30 Models for Production Systems (3, 3, 3) Seminar providing practice research to enhance professional development. Course work includes investigation of existing mathematical models for production processes and opportunities for original research.

6210-20 Network Flows (3, 3) In-depth treatment of widely applied network optimization algorithms including transportation and transshipment; primal-dual and primal basis-tree methods; multicommodity, multiterminal and dynamic flows; flow with gains, and other advanced topics. Prereq: 5310 or equivalent. A

6310 Integer Programming (3) Theoretical and computational aspects of linear programming with integer variables, branch and bound, cutting plane, and group theoretic algorithms. Prereq: 5310 or equivalent. A

6410 Large Scale Mathematical Programming (3) Development of solution strategies for linear programming problems that have many constraints, many variables or extremely sparse constraint matrices. Prereq: 5310 or equivalent. A

6510 Nonlinear Optimization (3) Solution of constrained and unconstrained nonlinear optimization problems focusing on algorithms that have performed well in recent practice. Prereq: 5310 or equivalent. A

6610 Markovian Decision Models (3) Formulation and analysis of Markov Chain models; Markov Chain models which incorporate decisions—their formulation, application and solution. A final oral examination. A

Stochastic dynamic programming models in continuous time. Prereq: 5390. F

College of Business/Management Science
methods to functional areas of marketing. Research concepts, methods, and techniques. Prereq: 5202; Statistics 5010. F, W
5350 Buyer Behavior Analysis for Marketing (3) Buyer behavior patterns with emphasis on implications for marketing analysis and executive decision making. Prerequisites: 5202; F, Su
5400 Analyzing Market Opportunity for Marketing Decisions (3) Basic determinants of opportunity within markets. Emphasis on application of multivariate research tools to functional areas of marketing. Consideration of alternative strategies. Coordination and control of marketing activities. Prerequisites: 5300 and 5350. Sp
5450 International Marketing Management (3) Development and management of international marketing programs. Problems involved in marketing goods and services in foreign countries; Political, cultural, and economic conditions in different countries. Prereq: 5202. W
5990 Research in Marketing (3) Directed research on subject of mutual interest to student and staff member. Prereq: 5202 and 5300. May be repeated. Maximum 6 hrs.
6000 Doctoral Research and Dissertation (3-15) P/NP only. E
6050 MacroTheoretical Foundations of Marketing (3) Fundamental nature and history of marketing processes. Role of marketing theory in developing marketing policies, and in research process. Environmental/public policy dimensions of marketing decision making. Prereq: Consent of instructor. A
6100 Design and Measurement in Marketing Research (3) Advanced design and measurement issues. Theoretical scaling considerations, application of multidimensional scaling, conjoint analysis. Prereq: Consent of instructor. A
6150 Marketing Research Applications (3) Application of multivariate research tools to functional areas of marketing. Prereq: Knowledge of multivariate analysis and consent of instructor. A
6200 Buyer Behavior (3) Behavioral processes of individuals and groups in roles as buyers of goods and services. Prereq: Consent of instructor. A
6250 Selected Problems in Consumer Behavior (3) Information search processes, attitude models, and consumer satisfaction. Prereq: Consent of instructor. A
6300 Marketing Decision Models (3) Model building processes in marketing decision making. Analytical techniques for the development of model building and simulation, marketing strategy, and marketing decision making. Prereq: Consent of instructor. A
6350 Current Topics in Marketing (3) Specific topics will vary with each course offering, but could include: nonbusiness marketing applications, macroenvironmental issues, market segmentation, children's television advertising, international marketing issues, marketing channels, and related issues. Prereq: Consent of instructor.
6910-20-30 Management Science Seminar (1-3, 1-3) Subject matter may be selected by student or instructor. A seminar of 6 hours is required for the non-thesis student not otherwise required for the degree. May be repeated. S/NC only. E
6920 Special Topics (3) Prereq: Management 5020. E
6990 Independent Study in Transportation/Logistics (3) Intensive survey of logistical demands made by society and specific users on nation's transportation system; problems facing carriers and government. Sp
5120 Management and the Pricing Problem (3) Critical analysis of application of economic theory and regulatory restraints to pricing of carrier services. Sp
5130 Carrier Transportation Management (3) Analysis of major transportation modes and their management. Emphasis on the role of the manager in applying the principles of transportation to transportation decision making in the public and private sector. F
5220 Logistics Systems Management (3) Development of strategic planning for transportation/logistics systems. Emphasis on executive level integration of logistics operations with marketing, production, and other decision areas. Practical applications through a case approach and simulation game. Prereq: Management 5020. W
5510 Urban Transportation Policy (3) Movement of people, goods and information in urbanized areas with special emphasis on formulation of national, state and local policy. Emphasis on evolving urban transportation concepts. W
5810 International Transportation Policy (3) Comparative analysis of transport systems in other countries. Analysis of U.S. policy relative to international transportation. E
5910 Advanced Law and Regulation (3) Legal rights and responsibilities of shippers and carriers. Analysis of decisions of regulatory commissions, courts, and principles of law arising from these decisions. Sp
5990 Independent Study in Transportation/Logistics (3) Directed study in surface and air transportation, national transportation policy, transportation/logistics research developments, or subject of particular interest to student and faculty. May be repeated. Maximum 6 hrs. E
6000 Doctoral Research and Dissertation (3-15) P/NP only. E
6110 Seminar in National Policy (3) Critical analysis of contemporary national transportation policy issues. Prereq: 5110. F
6210 Seminar in Transportation and Logistics Models (3) Analysis of contemporary models and methodologies in transportation and logistical research. Emphasis on topic basis at discretion of instructor. Prereq: Management Science 5010; Statistics 5010 or equivalent.
6220 Research Methodology in Transportation and Logistics (3) Philosophy and design of research in transportation and logistics.
Office Administration

J. Stafwall, Program Director

Professors:
E. W. Davis (Emeritus), M.S. New York; D. Reese, Ph.D. Iowa; E. R. Smith, Ph.D. Ohio State; J. Stafwall, Ph.D. Ohio State; G. A. Wagoner (Emeritus), M.S. Indiana.

Associate Professor:

Assistant Professors:
P. G. Campbell, M.S. Austin Peay; H. Petree, M.S. Tennessee.

Assistant Professors:
P. G. Campbell, M.S. Austin Peay; H. Petree, M.S. Tennessee.

Courses numbered below 5000 are not available for credit in the MBA program.

4310 Business Letter Writing (3) Principles, practices, and mechanics of effective business letters and memos; principles applied by solving communication cases; emphasis placed on letters and memos as initial sources of ideas in communications system of the business firm. Prereq: 4410. F

4320 Business Report Writing (3) Basic principles and procedures of originating and disseminating business reports, both formal and informal in style; writing techniques for short and long reports; graphic presentation and interpretation; use of primary and secondary data for reports. E

4420 Advanced Transcription (3) Improvement of ability to transcribe readable copy from dictation of a wide variety of correspondence; emphasis on competencies needed to meet occupational standards. Prereq: 4410. F

4510 Office Management (3) Strategic and operational planning of office objectives; relating tasks and human resources to objectives; recruiting, selection, training, and development of office staff; directing of office staff through leadership, motivation, communications; measurement of office performance, comparison to standards, and corrective actions; and applications of decision making to the office. Sp

4520 Office Systems (3) Synthesis of systems and subsystems applicable to centralized and decentralized office functions. Emphasis placed on cost analysis in contemporary office environment, technology, and research analysis. Sp

4810-30 Problems in Office Administration (1-3, 1-3, 1-3) Subject and title vary each quarter. May be repeated. Maximum 3 hrs for each course.

5011 Problems in Lieux of Thesis (3) S/NC only.

5050 Data Processing in Business (3) Fundamentals of data processing, computer programming and applications, systems design. (Available only as stated on page 33.) E

Statistics

MAJOR

Statistics

DEGREE

M.S.

Professors:
C. G. Thigpen (Head), Ph.D. Virginia Polytechnic Institute; D. S. Chambers (Emeritus), MBA Texas; R. A. McLean, Ph.D. Purdue; J. W. Philpot, Ph.D. Virginia Polytechnic Institute.

Associate Professor:
E. W. Davis (Emeritus), M.S. New York; D. Reese, Ph.D. Iowa; E. R. Smith, Ph.D. Ohio State; J. Stafwall, Ph.D. Ohio State; G. A. Wagoner (Emeritus), M.S. Indiana.

Assistant Professors:

Assistant Professors:
P. G. Campbell, M.S. Austin Peay; H. Petree, M.S. Tennessee.

The M.S. program in Statistics is designed to provide students a basic foundation in theoretical and applied statistics for meaningful careers as consulting and practicing statisticians. A candidate should possess an undergraduate degree with a strong background in calculus, but no restrictions are imposed regarding the undergraduate major. The typical Master of Science degree program in Statistics is as follows:

Statistics Major Area

4520 Office Systems (3) Synthesis of systems and office. Sp

4510 Office Management (3) Strategic and operational planning of office objectives; relating tasks and human resources to objectives; recruiting, selection, training, and development of office staff; directing of office staff through leadership, motivation, communications; measurement of office performance, comparison to standards, and corrective actions; and applications of decision making to the office. Sp

5050 Thesis (1-15) P/NP only. E

5020 Probability and Statistical Inference (5) Fundamentals of probability, discrete and continuous probability models, mathematical expectation, and inference concerning means. Prereq: Mathematics 5052 or equivalent and a computer programming course. May not be taken for credit by students who receive credit for 5110. F, W

5020 Statistical Methods (3) Regression and correlation models, basic time series analysis and forecasting; inferences about one or more proportions, and tests for independence. Prereq: 5101. W, Sp


5110 Introduction to Probability Theory (3) Classical probability and distribution theory. Prereq: Elementary linear algebra and calculus of several variables. F

5120-30 Theory of Statistical Inference (3, 3) Introductory theory underlying common statistical procedures of hypothesis testing and estimation. Prereq: 5110. W, Sp


5211 Elementary Statistics I (3) Introductory statistics for graduate students. Probability, sampling distributions, estimation, and hypothesis testing. Emphasis on interpretation and decision making. Not available for credit in any College of Business Administration degree program. F, Su


5510 Special Topics in Statistics (3) Prereq: Consent of instructor. May be repeated. Maximum 9 hrs.

5600 Applied Multivariate Analysis (3) Canonical correlation; discriminant analysis for several groups, and for equal and unequal covariance matrices; principal component analysis; Hotelling's $T^2$, multivariate analysis of variance and covariance. Prereq: 1 yr applied statistics including analysis of variance and multiple regression analysis. W

5670 Factor Analysis (3) Principal component analysis and principal factor analysis; estimates of communalities; methods of rotation; interpretation of factors; cluster analysis. Prereq: 6060. Sp

6210 Stochastic Processes II (3) Special analysis, time series, linear and nonlinear systems. Prereq: 5210.
The College of Communications offers two graduate degrees with a major in Communications, the Master of Science (M.S.) degree and the Doctor of Philosophy (Ph.D.) degree. The M.S. program (professional track) is accredited by the American Council on Education for Journalism. The College is a member of the American Association of Schools and Departments of Journalism and the Broadcast Education Association.

The program in Communications is listed in the Academic Common Market of the Southern Regional Education Board. Students residing in Alabama, Georgia, Kentucky, South Carolina, Virginia, and West Virginia can normally qualify for in-state fee status by applying to the Academic Common Market coordinators in their state capitals.

MASTERS OF SCIENCE

The Master of Science degree with a major in Communications is offered for students who primarily desire (1) advanced preparation in effective communication for mass media and other fields of applied communications, or (2) a deeper understanding of the communication process and the social role of the mass media. The prospective student who is interested in acquiring basic skills in journalism, advertising, or broadcasting is advised to consider a second baccalaureate rather than an advanced degree. (Note: There is no M.S. in Journalism or Advertising or Broadcasting at this institution. Students desiring a major in one of these fields must take the B.S. program.)

Applicants must meet admission requirements of The Graduate School. In addition they must complete the Graduate Record Examination, the California Psychological Inventory, and application forms as required by the College of Communications. All application materials will be screened by an admissions committee authorized by the Graduate Studies Committee of the College of Communications. New students may be admitted to the program at any time; however, core courses begin only in the fall quarter. Unless necessary materials are received at least six weeks before registration, applications may not be processed in time for admission to full potential candidate status in the first quarter. In these cases, the student may still qualify for non-degree or provisional status.

The student may choose either of two tracks, both leading to the M.S. in Communications and both requiring a thesis:

The academic track is designed for the student who wishes to emphasize advanced study of the theory and effects of communications. A minimum of 45 hours of approved graduate work is required:

- 12 hours of core courses:
  - Communications 5100, 5120, 5140 and 6140, the first three of which must be taken during the first two quarters of the student’s program, except with written approval of the Assistant Dean for Graduate Studies for the College. In addition, students who earned their Bachelor’s degrees outside the field of Communications will normally be required to add Communications 5130 to their core;
  - 24 hours of selected courses within the College, including at least 9 hours at the 5000 level;
  - 9 hours of thesis work (Communications 5000), including 3 hours of thesis seminar.

The professional track is designed for the student who desires the graduate degree but wishes to emphasize a particular professional area, such as advertising, broadcasting, journalism, or public relations. A minimum of 45 hours of approved graduate course work is required:

- 9 hours of core courses:
  - Communications 5100, 5120 and 5140, which must be taken during the first two quarters of the student’s program, except with written approval of the Assistant Dean for Graduate Studies for the College;
  - 15 hours in a major area within the College, including at least 6 hours at the 5000 level;
  - 9 hours of thesis work (Communications 5000); including at least 3 hours of thesis seminar;
  - at least 12 hours in a minor area approved by the major advisor, of which at least 6 hours must be at the 5000 level.

In addition, students with Bachelor’s degrees in other cognate areas will be required to complete prerequisites as designated by their advisors. Advising for the professional track will be supervised by the chairperson of the appropriate department of the College. Students who have had no courses in their major areas of concentration may expect to spend six or more full-time quarters in the program.

After the formal program of courses and research in either track is completed, the student must pass an oral examination conducted by his/her graduate committee.

Communications majors in the M.S. program must demonstrate ability to use a typewriter proficiently within their first quarter in residence.

DOCTOR OF PHILOSOPHY

The Ph.D. degree with a major in Communications is intended to prepare scholars for teaching, research, administration, and service in the field of human communications.

The program is interdisciplinary, consisting of a required core curriculum and recommended emphasis outside the College in the related social and behavioral sciences. The program is flexible and will accommodate a wide variety of career goals in communications. New students may be admitted to the program at any time; however, core courses begin only in the fall quarter.
The Master's degree is not required for entry into or completion of the doctoral program. Program planning, however, will permit the Master's degree to be earned if desired. Students lacking academic or professional experience in communications will be required to take prerequisite courses. In general, however, the program may be completed within three academic years of full-time study beyond the Bachelor's degree. Those holding Master's degrees should anticipate the completion of full-time study for completion of the Ph.D. degree.

The following are normally minimal requirements for admission to full potential candidate status: (a) a 3.0 (4.0 system) grade point average in undergraduate studies, or 3.5 for graduate work if applicant holds a Master's degree; (b) above the fiftieth percentile in verbal and quantitative aptitude on the Graduate Record Examination; (c) completion of the California Psychological Inventory; (d) endorsement by at least three former teachers or professional colleagues chosen by the Ph.D. Admissions Committee; (e) a statement of the applicant's goals and reasons for pursuing the Doctoral program; interview with members of the Ph.D. Admissions Committee may be required. Professional experience in some field of communications is a highly desirable criterion for admission.

The course requirements for the Ph.D. are:

1. Core 57 hrs
   Communications 5120, 5121, 5140, 5200, 5410, 5420, 5470, 6100, 6140, 6141, 6200; one of the following: 6300, 6310, 6320, 6330, plus 6 additional hours of advanced research courses; Statistics 5050 and 5060; 66330, plus 6 additional hours of advanced research courses; Statistics 5050 and 5060; 6 graduate hours of education; 3 graduate hours of organizational behavior; Computer Science 4510.

2. Primary Concentration 21 hrs
   (Advertising, broadcasting, journalism, public relations, or speech communication)

3. Secondary Concentration 18 hrs
   (Outside the College of Communications or a second concentration in Communications)

4. Dissertation 36 hrs

Total 132 hrs

Admission to candidacy will be attained at least three quarters prior to graduation and requires successful completion of a comprehensive examination. A diagnostic exam also must be taken about two quarters after entering the doctoral program. This exam covers Communications 6100, 5120-21, 5140, 6140, and one statistics course.

REQUIRED SCHOLASTIC AVERAGE

A student in the College of Communications whose graduate grade point average, not including incomplete grades, is below 3.0 at any time after the end of 12 hours of graduate credit will be placed on probation. A student on probation will be dropped from the program unless his or her cumulative graduate grade point average is 3.0 or higher at the end of the probationary period. The probationary period is defined as the next 12 quarter hours of graduate course work attempted which is specified in the student's degree program. Exceptions to this policy may be made only with the approval of the Assistant Dean for Graduate Studies of the College of Communications upon the recommendation of the student's faculty committee.

Communications Research Center

The Communications Research Center is a vital adjunct to the communications graduate program. Objectives of the Center are: (a) to conduct original research in mass and public communications; (b) to disseminate research-generated information; and (c) to provide research services to faculty and students, professional communicators, and others interested in improving the quality of human communications.

Departments of Instruction

Planned course offerings in the College of Communications for a full calendar year are published in the College newsletter the preceding November. This information is available from the Dean's Office, 302 Communications Building, 974-3001.

Communications

MAJOR DEGREES

Communications M.S., Ph.D.

Professors: J. A. Crook, Ph.D. Iowa State; A. D. Fletcher, Ph.D. Illinois; J. B. Haskins, Ph.D. Minnesota; D. G. Hileman, Ph.D. Illinois; D. W. Hoe, Ph.D. Northwestern; N. H. Howard, Ph.D. Ohio; B. K. Leiter, Ph.D. Southern Illinois; D. D. Nimmo, Ph.D. Vanderbilt.

Associate Professors: A. E. Everett, Ph.D. Iowa; M. M. Miller, Ph.D. Michigan State; W. M. Singletary, Ph.D. Southern Illinois.

5000 Thesis (1-15) P/NP only. E

5002 Non-Thesis Graduation Completion (3-15) For those students not otherwise registered during any quarter when such a student uses university facilities and/or faculty time before degree is completed. May not be used toward degree requirements. Must be completed within three academic years of full-time student status. Maybe repeated. S/NC only. E

5100 Introduction to Graduate Studies (3) Scope and methods of advanced study in communications. Information sources, literature review methods, scholarly style, thesis and degree requirements and procedure, overview of traditional and behavioral research methods. Su, F

5102 Communications Research Design (3) Non-experimental, quasi-experimental, laboratory and field experimental designs. Universal research processes from idea/problem definition to reporting results. Correlation vs. causation. Su, F

5120 Communications Research Methods (3) Fundamentals and specific applications of most common data-gathering and measurement techniques in communications research. Focus groups, mail and personal and telephone surveys; content analysis; mechanical and physiological measurement; observation; attitude measurement. Prereq: 5100, W

5130 Advanced Principles of Mass Communications (3) Seminar covering all phases of mass communications including history, development and current status of communication-industry, principles of broadcasting, and principles of advertising. F

5140 Mass Communication Theory I (3) Critical appraisal of selected hypotheses and theoretical concepts in research literature of mass communica-

5150 Seminar in Communications Issues (3) Contemporary topics in communications. Prereq: 5100 or 5140, or consent of instructor. Maybe be repeated. Minimum 6 hrs.

5200 Seminar in Communications Education (3) Principles and historical perspectives of education for journalism, broadcasting, and advertising. W

5410 Seminar in Communications Law (3) Legal limitations, privileges, and major issues affecting mass media: law of libel and invasion of privacy, development of obscenity law, free press and fair trial, contempt of court, federal regulation of broadcasting, advertising and public relations industries, copyright and access to information. F

5420 Seminar in Communications History (3) Major trends in media history; development of major concepts and issues. Prereq: Survey course in communications history or consent of instructor. Sp

5470 Seminar in Media Economics and Management (3) Electronic and print media ownership and finance, role of new technologies and marketing techniques, corporate marketing, marketing expansion. Prereq: 5130 or equivalent. Sp

5970 Independent Study (3) Reading, research, or projects on special topics in communication. On individual basis, under faculty direction, with consent. Maybe be repeated.

6000 Doctoral Research and Dissertation (3-15) P/NP only. E

6100 Introduction to Doctoral Studies (1) Doctoral degree and dissertation requirements. Committee formation and program planning. Prereq: Overview of research methods and informational sources. S/NC only. F

6140 Mass Communication Theory II (3) Application of theory to contemporary mass communication problems. Topical approach; literature reviews and analytical papers. Prereq: 5120, 5140, 6100. W

6141 Mass Communication Theory III (3) Continuation of 6140, detailed analysis of selected topics in theory and research. Tutorials, readings, reviews, reports, and papers in fields of interest. Prereq: 6140, Sp

6200 Seminar in Communication Topics (3) Identification, presentation, and analysis of special issues and problems in communication. Organization and strategy in writing research proposals. Prereq: 5100, 5120 or 5140. Recommended prereq: 6100 or consent of instructor. Sp

6300 Survey Research Methods in Communications (3) Survey methods applied to opinion and communications media research problems. Planning, sampling, questionnaire construction, data gathering (personal, mail, and telephone), data processing and interpretation. Attitude measurement and message pretesting applications. Prereq: 5120 or consent of instructor. Sp

6310 Experimental Research Methods in Communications (3) Experimental methods applied to communications research problems. Causal inferences from various research designs. Control, single-factor, and multifactor experimental designs. Laboratory and field experimental situations. Prereq: 5120 or consent of instructor. Prereq or coreq: Basic statistics. W

6320 Seminar in Historical Research Methods in Communications (3) Materials and methods in historical, descriptive, and legal research in communications theory and behavior. Prereq: 5100, 5120. Recommended prereq: 5140, 6100. Su

6330 Content Analysis (3) Content analysis as mass media research technique, conceptual foundations. Research design, categorization, sampling procedures, data gathering, and analysis. F
Advertising

Professors: R. Joel (Head), M.A. Wisconsin; A. D. Fletcher, Ph.D. Ill.; D. C. Hillman, Ph.D. Illinois.
Assistant Professor: J. B. Dunlap, Ed.D. Akron.

3650 Radio-Television Writing (3) Ideas and their translation into persuasive words and pictures. Principles and techniques of copy and layout. Lecture, labs and a grade of "C" or better or consent of instructor. F, W, Sp

4000 Advanced Advertising Copy and Layout (4) Creative strategy and execution of advertisements for mass media. Problems in idea creation for advertisers. Lectures and labs. Prereq: 3630 with grade of "C" or better or consent of instructor. F, W, Sp

4360 Advertising Media (3) Media, markets, and audiences. Evaluation of media in relationship to communication needs of advertisers. Prereq: 3000 with grade of "C" or better or consent of instructor. E

4460 Cases and Problems (3) The case approach to the study of advertising problems. Analysis of campaign成败s. Prereq: 3630, 3650 and 4360 with grade of "C" or better or consent of instructor. F, W, Sp

4470 Advertising Campaigns (4) Application of theory to strategic and execution of campaigns. Market and consumer research; development and allocation of budgets. Choice of appeals and approaches. Prereq: 3650, 4000 and 4360 with grade of "C" or better or consent of instructor. F, W, Sp

5310 Current Issues in Advertising (3) Current socioeconomic, legal, ethical, and cultural issues in advertising and communication to determine advertising's role in and responsibility toward society. Emphasis in both marketing and behavioral science aspects of advertising. Consideration of creative, media, management, and research. Extensive individual reading; preparation and delivery of papers. Prereq: Consent of instructor.

5340 Advertising Management (3) Agency-client relations, media strategy, creative strategy, research, and relationship between advertising and marketing function. Prereq: 4360 and 3630 or consent of instructor.

5510 Current Advertising Research (3) Nature, scope, and application of research including measurement of advertising, media audiences, and evaluation of messages. Prereq: 4460 or consent of instructor.

5510 Creative Projects (3) Creative or problem solving interests related to advertising. Designed for the advanced student who wishes to apply theory and skills. F, W, Sp Prereq: 4000 and 4460 or consent of instructor. May be repeated.

5970 Independent Study (3) E

Broadcasting

Professors: D. W. Hise (Head), Ph.D. Northwestern; H. H. Howard, Ph.D. Ohio.
Associate Professor: P. G. Ashdown, Ph.D. Bowling Green; J. L. Simpson, M.S. Syracuse; M. W. Singletary, Ph.D. Southern Illinois.
Assistant Professors: B. A. Moore, Ph.D. Ohio; R. A. Shirley, M.A. Tennessee.
Communications Specialist: J. H. Carr, M.S. Tennessee.

3360 Television and Radio Advertising (3) Principles of successful radio-television advertising; evaluation of broadcast styles, sales promotion techniques, creative programming, creavity, telecommunication commercials. W, Sp

3850 Radio-Television Writing (3) Theory and technique of writing broadcasting scripts except news and documentaries. Special events, interviews, musical scripts, radio talks, documentaries, and promotion material. F, W, Sp

4010 Speech for Broadcasting (5) Fundamental broadcast conditions affecting the announcer; pronunciation and oral interpretation of general American speech; Spanish, Italian, German, and French pronunciation. F, W, Sp

4020 Radio Production (3) Study of radio productions, past and present. Familiarization with production tools and techniques. Group and individual production activities. Prereq: 3750 or consent of instructor. Cannot be taken for graduate credit by communications majors.

4030 Television Production (3) Overview of elements of television production: cameras, sound, lighting, film, videotape recording, optics, and studio control centers. Presented with the layperson and professional broadcast student in mind. Prereq: 4020 or consent of instructor. Cannot be taken for graduate credit by communications majors.

4040 Advanced Television Production (3) A semi-independent course in program origination, producing, directing and performing with orientation to the professional broadcast student. Prereq: 4020 or consent of instructor. Sp

4610 Broadcast News Operation (3) Theory and practice in covering local news and public affairs events (radio, television, gathering, and production of news broadcasts, using tools of broadcast. Prereq: 3610 and 3670 or consent of instructor. F, W

4670 Radio-Television Management (3) Business policies and practices of networks and stations. Departmental functions, cost and income figures, sales techniques, promotion agencies, and governmental regulations. Lectures by commercial broadcasters. Prereq: 2750 or consent of instructor. F, Sp, Su

4680 Broadcast Sales Management (3) Problems and practices of television and radio sales, case studies in sales development pricing, promotion, and other areas of sales management. Prereq: 2750 or consent of instructor. F, Sp, Su

5510 Creative Projects (3) For students having specialized broadcasting interests or those who wish extensive direction in creative writing or production projects. May be repeated. E

5610 Public Affairs Broadcasting (3) News and public affairs function in broadcasting stations and networks, including management, economics, personnel utilization, sources of program materials, ethical and legal aspects. Public affairs program development, promotion, research, and use of information. Prereq: 3610 or consent of instructor. W

5620 Broadcast Law and Regulations (3) Sociopolitical control of broadcasting; effect of laws, regulations, and public pressures upon station policies. Emphasis on unique situation of broadcasting among media in terms of regulation. Prereq: Journalism 4410 or 5210 or consent of instructor. F

5630 Broadcast Documentary Writing (3) Role of documentary in radio and television. Research, writing, and critique of documentary programs.

5650 Radio-Television Program Development (3) Plan writing, design, programming techniques, and requirements for broadcasting stations. Historical trends in programming and current programming practices as related to audience requirements, governmental policy, and competitive conditions. Individual studies of program development on both local station and network levels. Prereq: 2750 or consent of instructor. Su

5970 Independent Study (3) E

School of Journalism

Professors: J. A. Crook (Director), Ph.D. Iowa State; J. H. Haskins, Ph.D. Minnesota; B. K. Spald, Ph.D. Southern Illinois; D. N. Nimmo, Ph.D. Vanderbilt.


Assistant Professors: M. L. Kern, Ph.D. Wisconsin; D. L. Smith, M.A. San Francisco State.

3120 Writing Feature Articles (3) Selection of topics and practice in writing feature articles for newspapers, magazines, and company publications. Prereq: 2220 or consent of instructor. E

3410 Communications Law (3) Statutory law and judicial precedents affecting mass communications. Libel, contempt of court, invasion of privacy, copyright, broadcasting, advertising and postal regulations. E

3710 Public Relations (3) Theories and principles of public relations. Overview of PR as a managerial tool of business, government, institutions, and organizations. Cannot be taken for graduate credit by communications majors.

3720 Advanced Public Relations (3) Preparation of communications materials to gain support from various publics; planning public relations programs. Prereq: 3710. F, Sp

3810 Specialized Publications (3) Editorial and design considerations for company publications and small magazines. Prereq: 2230 and 3310 or consent of instructor. W, Sp

3900 Journalism Research Methods (3) Use of social science research methods in journalism with emphasis on survey techniques. Interpretation and communication of research findings to public. W, Sp

4130 Editorial Writing (3) Analysis of editorial policies, practices, pages. Writing of editorials and columns, with emphasis on study and use of rhetorical devices and logic. Sp

4150 Issues in Journalism (3) Topics vary. May be repeated. Maximum 6 hrs.

4310 Reporting Public Affairs (3) Reporting news of courts, politics, and government. Study and local coverage. Prereq: 2330 and senior standing. W, Sp

4410 Mass Media and Society (3) Roles and responsibilities of mass media in society. Critique of mass media performance. Media codes and controls on the media. E

4420 Newspaper Management (3) Daily and weekly business operations. Developments in newspaper management. Sp

4560 Investigative Reporting (3) Investigative and interpretive reporting of complex or specialized subjects to place news in perspective or to clarify situations. Emphasis on writing for publication. Prereq: 2220. W

4710 Public Relations Cases (3) Case studies and applications of public relations principles to problems in business and industry, government, institutions, trades and professions, solving problems in public relations situations. Prereq: 3720. F, Sp

4810 Journalism in the High School (3) Functions and methods of high school publications. Staff organization, writing and editing techniques, editorial problems, and business management. Sp

4910 News and Feature Photography (3) Advanced principles and methods in black-and-white photography. Emphasis on news and feature photography, and picture stories. Prereq: 3910 or consent of instructor.

4950 International Communications (3) Communication of news and opinion among nations and
under varying types of political and economic systems, world news organizations; the press as a factor in international affairs; barriers to the flow of information; comparison of world press systems.

4970 Independent Study (3) May be repeated. Maximum 6 hrs.

5210 Government and the Press (3) Historic and current problems in the relations of executive, judicial, legislative, and regulatory segments of governmental and press. Prereq: 3110 or consent of instructor. W

5250 Public Opinion and Mass Media (3) Nature of public opinion with emphasis on role of press in its formation and how the press in turn is influenced by public opinion. Prereq: 4410 or consent of instructor. P

5510-20-30 Writing and Editing Projects (3, 3, 3) Specialized writing or editing interests, such as agriculture, politics, labor, finance, science, for technical as well as general publications. Prereq: 2220 or 2230.

5560 Magazine Article Writing (3) Techniques of writing in-depth articles for mass circulation magazines. Organizing and presenting material. Problems in specialized areas, such as business, science, agriculture, the humanities. Prereq: 3120 or consent of instructor. Sp

5710 Studies In Public Relations Communications (3) Problems of communication between institutions and organizations and their publics. Case histories and evaluations of programs. Prereq: 3710 or consent of instructor.

5810 Magazine Editing and Production (3) Analysis of editorial and production problems of general, regional, and specialized publications. Reader interest evaluation. Individual editorial projects. Prereq: Consent of instructor. F

5950 Communications and International Development (3) Seminar emphasizing mass media in national and international development. Communications and change in developing countries. Problems in international and cross-cultural communications. Prereq: 4950 or consent of instructor.

5970 Independent Study (3)
The College of Education

William H. Coffield, Dean
C. Glennon Rowell, Associate Dean for Instructional Programs
Thomas W. George, Assistant Dean for Support Services
Madge M. Phillips, Director, School of Health, Physical Education, and Recreation
Charles M. Peccolo, Director, Bureau of Educational Research and Service

The faculty of the College of Education is committed to performing three major functions: (1) to provide professional preparation for teachers, administrators, school service personnel, and selected other professionals such as health and recreation personnel at the undergraduate and graduate levels; (2) to collaborate with school personnel, educational agencies, professional groups, and others interested in the evaluation and improvement of educational opportunities, programs, and services; and (3) to promote and conduct research and development in education and other areas of responsibility.

The College of Education holds membership in the American Association of Colleges for Teacher Education. All certification and degree programs through the doctoral level are fully accredited by the National Council for Accreditation of Teacher Education, the Southern Association of Colleges and Schools, and the Tennessee State Department of Education.

The College of Education, through The Graduate School, offers programs leading to the Master of Arts in College Teaching, the Master of Science in Education degree, the Doctor of Education, and the Doctor of Philosophy degrees.

Masters of Science in Education

The College of Education offers programs of advanced study leading to the Doctor of Education degree in the major areas listed on page 8, and to the Doctor of Philosophy degree in Health Education.

The Ph.D. program with a major in Education provides five options for study in the departments of Curriculum and Instruction, Educational Administration and Supervision, Educational and Counseling Psychology, Physical Education, and Vocational-Technical Education. The program requirements and the options and emphases are:

The Program

<table>
<thead>
<tr>
<th>Research Area</th>
<th>21 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign or Computer Language</td>
<td>0-9 Hours</td>
</tr>
<tr>
<td>General Core Requirements</td>
<td>6 Hours</td>
</tr>
<tr>
<td>Courses in history of education, philosophy of education</td>
<td>Minimum</td>
</tr>
<tr>
<td>(two areas must be represented)</td>
<td></td>
</tr>
<tr>
<td>Courses in learning theory, curriculum theory, and administrative theory</td>
<td>9 Hours</td>
</tr>
<tr>
<td>(three areas must be represented)</td>
<td>Minimum</td>
</tr>
<tr>
<td>Trans-college seminar—four consecutive quarters</td>
<td>4 Hours</td>
</tr>
<tr>
<td>Specialization: Major Option—A minimum of 24 hours normally selected from one or two emphases within the major option</td>
<td>24 Hours</td>
</tr>
<tr>
<td>Supporting Emphasis—A minimum of 12 hours selected from an emphasis other than those emphases selected in the major option. (May be selected from any one of the five options but not a combination of options.)</td>
<td>12 Hours</td>
</tr>
<tr>
<td>Cognate—A minimum of 9 hours selected from outside the College in addition to the designated research courses</td>
<td>Minimum</td>
</tr>
</tbody>
</table>

Dissertation Minimum

Options and Emphases

Option I. Administrative Theory and Practice
The Administration of Higher Education
Contemporary Economics and Educational Finance
Educational Planning
Facility Planning
Maintenance of School Plants
Organizational Theory
Personnel Administration
The Politics of Education
The Principalship
School Law
The Superintendent
Supervision

Option II. Theories of Curriculum Development and Foundations of Education
Anthropological, Historical, Philosophical, and Sociological Bases for Educational Planning and Curriculum
Principles and Models for Planning, Developing, and Evaluating Educational Programs
Research Design for Educational Programs

Option III. Instructional Theory and Practice
Principles and Models for Instructional Improvement
Subject Areas of Instruction and Practice: i.e., English, Foreign Languages, Mathematics, Science, Social Studies, etc.
Elementary and Early Childhood Instruction and Practice
Learning Media Services
Physical Education Instruction and Practice
Adapted Physical Education
Vocational-Technical Fields of Instruction and Practice

Option IV. Theories and Practice of Educational and Personal Adjustment
Assessment (Educational, Vocational, Personality)
Behavioral Interventions
Certification in art while pursuing the Master's degree program in Art Education.

The thesis option requires 45 quarter hours as follows:

<table>
<thead>
<tr>
<th>Quarter hours</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Art Education 5310, 5320 and electives</td>
<td>18</td>
</tr>
<tr>
<td>2. Curriculum and Instruction 5710, and electives</td>
<td>9</td>
</tr>
<tr>
<td>3. Minor (selected with committee)</td>
<td>9</td>
</tr>
<tr>
<td>4. Theses (Art Education 5000)</td>
<td>9</td>
</tr>
</tbody>
</table>

The non-thesis option requires 45 quarter hours as follows:

<table>
<thead>
<tr>
<th>Quarter hours</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Art Education 5210, 5310, 5320, and electives</td>
<td>21</td>
</tr>
<tr>
<td>2. Curriculum and Instruction 5800, and electives</td>
<td>9</td>
</tr>
<tr>
<td>3. Minor (selected with committee)</td>
<td>9</td>
</tr>
<tr>
<td>4. Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

The thesis option requires satisfactory completion of an examination prior to awarding the degree, while the non-thesis option requires satisfactory completion of a final written comprehensive examination. Both the oral and written exams are conducted by the student's Master's degree committee. Not all courses in art education are offered regularly each quarter, so the student should plan his or her program carefully with a faculty advisor.

4350-60-70 Problems in Art Teaching (3, 3, 3) Prereq: Consent of instructor. E 5000 Thesis (1-15) P/NP only. E 5002 Non-Thesis Graduation Completion (3-15) Required for the non-thesis student not otherwise registered during any quarter when such a student uses university facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E 5210 Organization, Administration, and Supervision of Art in the School Program (3) W 5310 Art in Education (3) Historical background, current philosophy, theory, and trends; nature and function of aesthetic behavior in visual arts; relationships to psychology, sociology, and anthropology. F 5320 Program Development in Art Education (3) Objectives, organization, content selection, facilities, and equipment; supervision; evaluation; professional growth; leadership and community relationships; art for special student. Sp 5680-60-70 Problems in Art Education (3, 3, 3) Prereq: Consent of instructor. E

Music Education

<table>
<thead>
<tr>
<th>Quarter hours</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Music Education 5210, 5220, 5230 and electives</td>
<td>18</td>
</tr>
<tr>
<td>2. Music electives</td>
<td>9</td>
</tr>
<tr>
<td>3. Professional education courses including Curriculum and Instruction 5710</td>
<td>9</td>
</tr>
<tr>
<td>4. Music Education 5000</td>
<td>9</td>
</tr>
</tbody>
</table>

Total 45

Requirements for non-thesis option:

<table>
<thead>
<tr>
<th>Quarter hours</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Course requirements</td>
<td></td>
</tr>
<tr>
<td>Music Education 5210, 5220, 5230 and electives</td>
<td>27</td>
</tr>
<tr>
<td>Music electives</td>
<td>15</td>
</tr>
</tbody>
</table>

Total 45

4441-42-43 Teaching Class Piano (1, 1, 1) For majors in music, music education, or elementary education. Prereq: Consent of instructor. F, W, Sp 4450 Music in Special Education (3) Techniques and materials for exceptional children. Prereq: 3110-20. 4460 Marching Band Techniques (3) Functions, organization, and direction of a school marching band. Prereq: Consent of instructor. Coreq: 3511. F, Su 5000 Thesis (1-15) P/NP only. E 5002 Non-Thesis Graduation Completion (3-15) Required for the non-thesis student not otherwise registered during any quarter when such a student uses university facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E
5150 Studies in Secondary School Music (3) Development of understandings regarding growth patterns and processes through music experiences; cultural and community influences on secondary school music; problems in administration and teaching of music in secondary school; relationship of music with humanities in curriculum. Sequel to 3150.

5210 Psychological Foundations of Music (3) Perception; function; aesthetics; talent measurement; implications for teaching theory and practice. A review of classic and current experimental studies. Prereq: Consent of instructor. Su.

5220 The Administration and Supervision of School Music (3) Improvement of teacher-learning, child-learning process in music education. Problems of supervision, research, and in-service education, teacher preparation, and guidance.

5230 Comparative Teaching Procedures in Music Education (3) Modern teaching theories and their implications.

5240 Evaluation Procedures in Music Education (3) Tests, measurements, and evaluation of musical development of students at all levels. Standard educational measurements and teacher-made tests applicable to music and special evaluative techniques for use in classroom situations. Uses of musical apparatus and authentic teaching tests. Statistical measures applied to learning music. Prereq: General psychology, educational psychology, and elementary statistics. Su.

5250 The Role of Music in Education (3) For schoo! administrators, music teachers, on the role of music in public education. No previous experience in music required. Su.

5260 Music for Early Childhood (3) Prereq: 3120 or 3130 or consent of instructor.

5270 Studies of Music for Children in the Primary Grades (3) Children's growth patterns in music for Grades 1-3, and musical experiences. For major in music education and/or elementary education. Prereq: 3120 and 3130 or consent of instructor.

5320 Advanced Choral Literature and Conducting (3) Reading, conducting, and interpreting vocal scores suitable for school, college, church, and community groups; emphasis on contemporary and standard major choral works. Prereq: Undergraduate degree with a major in music or music education; 4450, 4510 or equivalent.

5350-69-70 Special Problems in Music Education (3, 3, 3) Current problems in music education at all levels of instruction and in various specialized areas of music curriculum. Prereq: 5710 or equivalent and consent of instructor. E.

5410 Advanced Band Literature and Conducting (3) Reading, conducting, and interpreting band scores suitable for school, college, and community bands; emphasis on contemporary and standard band literature. Prereq: Undergraduate degree with a major in music or music education; 4430 or equivalent.


5710 Research in Music Education (2) Prereq: Consent of instructor. Su.

5810 Seminar (3) Music teaching in primary and intermediate grades. Survey of research, professional literature and development of bibliography, laboratory activities. Projects. Prereq: Admission to M.S. program.

5820 Seminar (3) Music teaching in vocal and general music areas of junior high school curriculum. Survey of research, professional literature and development of bibliography, laboratory activities. Projects. Prereq: Admission to M.S. program.

5830 Seminar (3) Music teaching in instrumental areas of the elementary, junior high, and senior high curricula. Survey of research, professional literature and development of bibliography, laboratory activities. Projects. Prereq: Admission to M.S. program.

5840 Seminar (3) Music teaching in vocal, theoretical, historical, and appreciation area of the secondary school curriculum. Survey of research, professional literature and development of bibliography. Laboratory activities. Projects. Prereq: Admission to M.S. program.

Continuing and Higher Education

MAJOR

Adult Education

M.S.

College Student Personnel

M.S.

Professors:


Associate Professor:

M. G. McNIN, Jr. (Head), Ph.D. Florida State.

Assistant Professor:

W. D. Barton, Tennessee.

The Master of Science degree in Adult Education is offered for teachers, administrators, counselors, and community education specialists. The degree program has two options: a thesis option requiring a minimum of 45 hours, and a non-thesis option requiring a minimum of 51 hours. For each option, 9 hours must be completed in the behavioral sciences.

The Master of Science degree in College Student Personnel is designed for individuals interested in entering the field of student personnel administration in colleges and universities and in community or junior colleges. The program has both a thesis and non-thesis option. A minimum of 60 hours, which includes 9 hours of practicum experience, is required in either option. For further information write the Department of Continuing and Higher Education.

4554-55-56 Student Leadership Workshops (1, 1, 1) Small group and individualized experiences to develop knowledge and skills in leadership roles; for resident assistants, student government leaders, student activities, other student organizations. Prereq: Consent of instructor. S/NC only.

5000 Thesis (1-15) P/NP only. E.

5002 Non-Thesis Graduation Completion (3-16) Required for the non-thesis student not otherwise registered during any quarter when such a student uses university facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E.


5110 Seminar in College Teaching (3) Effective college teaching; testing and measurement; recent research in college instruction; major problems and issues in higher education. Required of candidates for the MACT degree. S/NC only. Sp.

5360-70-80 Problems in Continuing and Higher Education (1-3, 1-3, 1-3) Independent study of problems and special institutes. S/NC only. E.

5410 College and University Law—The Legal Environment (3) Legal precedent affecting student personnel services in public higher education. Student discipline, housing, dress, organizations, activities, fees, tuition, and related federal regulations.

5430 College and University Law—Tort Liability and Risk Management (3) Legal precedent concerning liability exposure of public institutions in higher education. Personal and institutional liability. Basic principles of risk management and liability insurance. Prereq: 5410 and 5420, or consent of instructor.


5450 Instruction in Higher Education (3) Problems, procedures, and techniques. W.

5460 Adult Development (3) Changes in characteristics of the adult over the life span and implications for adult education. F.

5470 The Curriculum of Undergraduate Higher Education (3) Background, content, and organization of instructional programs, trends and evaluation procedures, including accreditation activities.

5510 Governance of Colleges and Universities (3) Development, change, trends, process, and structure of collegiate governance. F.


5660 Program Planning in Continuing and Higher Education (3) Theory and method for planning adult education programs. W.

5750 Student Personnel in Higher Education (3) Philosophy and scope.

5770 Case Studies in College Student Personnel (3) Prereq: 5750 or consent of instructor.

5860 The Community-Junior College (3) History and role of two-year college, major functions, organization and administration, problems, and issues. F, Sp.

5955-65-75 Practicum in Continuing and Higher Education (1-3, 1-3, 1-3) Supervised practice in selected areas of instruction or administration of continuing or higher education programs. S/NC only. E.

5960-70-80 Seminar in Continuing and Higher Education (1-3, 1-3, 1-3) Topics and issues confronting professionals in fields of adult or higher education. E.

5990 Practicum in College Student Personnel (3) Prereq: 5750, 5770, Educational Psychology 5860, or consent of instructor. May be repeated with consent of instructor. Maximum 9 hrs.

6450 Advanced Seminar in Program Planning (3) Concepts and theories related to program planning in continuing and higher education. Prereq: 5960 or equivalent.

See also course listings under the Departments of Curriculum and Instruction, Educational Administration and Supervision, and Educational and Counseling Psychology.

Curriculum and Instruction

MAJORS

DEGREES

Curriculum

M.S.

Curriculum and Instruction

Ed.S., Ed.D.

Elementary Education

M.S.

English Education

M.S.

Foreign Language Education

M.S.

Instructional Media and Technology

M.S.

Mathematics Education

M.S.

Reading Education

M.S.

Science Education

M.S.

Social Science Education

M.S.

Education

Ph.D.