

*The
College of
William & Mary
in Virginia*



UNDERGRADUATE PROGRAM CATALOG
1977-1978

GENERAL STATEMENT OF POLICY

Within the limits of its facilities and its obligations as a State university, the College of William and Mary opens the possibility of admission to all qualified students without regard to sex, race, color, age, religion, or national origin; the facilities and services of the College are open to all enrolled students on the same basis, and all standards and policies of the institution, including those governing employment, are applied accordingly.

Note: This catalog provides announcements for the 1977-78 academic year. It is current until August, 1978. The College reserves the right to make changes in the regulations, charges, and curricula listed herein at any time.

Catalogs are issued for other College programs as follows:

- School of Business Administration
- School of Education
- Graduate Studies in Arts and Sciences,
and Marine Science
- Marshall-Wythe School of Law
- Summer Sessions

Bulletin of The College of William and Mary—Undergraduate Catalog Issue
Vol. 71, No. 8 August, 1977

Senior citizens of Virginia who wish to take advantage of fee waiver privileges for attending courses at William and Mary are invited to contact the Office of Admissions for full details.

*The
College of
William & Mary
in Virginia*



THE UNDERGRADUATE CATALOG

ANNOUNCEMENTS FOR THE
TWO HUNDRED AND EIGHTY-FIFTH YEAR

WILLIAMSBURG, VIRGINIA

1977-1978

CORRESPONDENCE DIRECTORY

To facilitate prompt attention, inquiries should be directed to the following at College of William and Mary, Williamsburg, Virginia 23185

ACADEMIC AFFAIRS

George R. Healy, *Vice President for Academic Affairs*

ADMISSIONS

Robert P. Hunt, *Dean of Admissions*

AFFIRMATIVE ACTION PROGRAMS

Wesley C. Wilson, *Coordinator*

BUSINESS MATTERS, FEES AND EXPENSES

William J. Carter, *Vice President for Business Affairs*

DEVELOPMENT, ANNUITIES AND GIFTS

Warren Heemann, *Vice President for College Development*

ALUMNI AFFAIRS

Gordon C. Vliet, *Executive Vice President, Society of the Alumni*

EMPLOYMENT OF STUDENTS, STUDENT LOANS, SCHOLARSHIPS

E. Leon Looney, *Director of Student Aid*

GRADUATE STUDIES

John E. Selby, *Graduate Dean of Arts and Sciences*

William E. O'Connell, Jr., *Associate Dean for Graduate Studies, School of Business Administration*

Robert Emans, *Associate Dean of School of Education*

William B. Spong, *Dean of Marshall-Wythe School of Law*

William J. Hargis, Jr., *Dean of School of Marine Science*

PUBLIC INFORMATION SERVICES

Ross L. Weeks, Jr., *Director*

RECORDS AND TRANSCRIPTS

Charles R. Toomajian, Jr., *Director of Registration and Records.*

SPECIAL PROGRAMS

Carson H. Barnes, Jr., *Director*

STUDENT LIFE

W. Samuel Sadler, *Dean of Students*

SUMMER SESSION AND EVENING CLASSES

Paul N. Clem, *Director*

VIRGINIA ASSOCIATED RESEARCH CAMPUS

Henry Aceto, Jr., *Director*

CONTENTS

CORRESPONDENCE DIRECTORY	ii
COLLEGE CALENDAR FOR 1977-78	iv
GENERAL STATEMENT OF POLICY	COVER II
I. THE COLLEGE	1
Objectives	1
Presidents and Chancellors	3
Board of Visitors	4
Directory of Administrative Officers	5
Faculty	9
Earl Gregg Swem Library	31
Health and Psychological Services	31
II. ADMISSION TO THE COLLEGE	33
III. FINANCIAL ASSISTANCE, ACADEMIC AND SPECIAL SCHOLARSHIPS FOR STUDENTS	36
IV. TUITION AND EXPENSES	38
V. REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS	44
VI. FIELDS OF CONCENTRATION, SUBPROGRAMS, AND COURSE DESCRIPTIONS	56
The Faculty of Arts and Sciences	57
The School of Business Administration	163
The School of Education	169
The School of Marine Science	176
VII. MISCELLANEOUS INFORMATION	179
INDEX	181



The Sir Christopher Wren Building

COLLEGE CALENDAR

1977-78

1977	First Semester
August 28-31	Orientation Period (Sunday-Wednesday)
August 31	Registration of Graduate Students (Wednesday)
September 1	Registration of entering Freshmen and other new students (Thursday)
September 2	Beginning of Classes: 8 a.m. (Friday)
September 2-3	Registration Validation (Friday-Saturday)
September 15	Last Day for changes in registration: 5 p.m. (Thursday)
September 30- October 1	Parents Weekend (Friday-Saturday)
October 29	Homecoming (Saturday)
November 23	Beginning of Thanksgiving Holiday: 1 p.m. (Wednesday)
November 28	End of Thanksgiving Holiday: 8 a.m. (Monday)
December 7	End of Classes: 5 p.m. (Wednesday)
December 8-11	Reading Period (Thursday-Sunday)
December 12-20	Examinations (Monday-Tuesday)

1978	Second Semester
January 13	Registration of New Students (Friday)
January 16	Beginning of Classes: 8 a.m. (Monday)
January 16-17	Registration Validation (Monday-Tuesday)
January 27	Last Day for changes in registration: 5 p.m. (Friday)
February 11	Charter Day (Saturday)
March 3	Beginning of Spring Vacation: 5 p.m. (Friday)
March 13	End of Spring Vacation: 8 a.m. (Monday)
April 26	End of Classes: 5 p.m. (Wednesday)
April 27-30	Reading Period (Thursday-Sunday)
May 1-9	Examinations (Monday-Tuesday)
May 14	Commencement Day (Sunday)

Summer Session

June 12	Beginning of First Term (Monday)
July 14	End of First Term (Friday)
July 17	Beginning of Second Term (Monday)
August 18	End of Second Term (Friday)
August 19	Summer Session Commencement (Saturday)

COLLEGE CALENDAR

AUGUST 1977
S M T W T F S
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31

SEPTEMBER 1977
S M T W T F S
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30

OCTOBER 1977
S M T W T F S
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31

NOVEMBER 1977
S M T W T F S
1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30

DECEMBER 1977
S M T W T F S
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

JANUARY 1978
S M T W T F S
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31

FEBRUARY 1978
S M T W T F S
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28

MARCH 1978
S M T W T F S
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31

APRIL 1978
S M T W T F S
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30

MAY 1978
S M T W T F S
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31

JUNE 1978
S M T W T F S
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30

JULY 1978
S M T W T F S
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31

AUGUST 1978
S M T W T F S
1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31

I. THE COLLEGE

OBJECTIVES

A Small, Residential, Full-time Coeducational University

Founded in 1693 as the second institution of higher education in the country, the College of William and Mary in Virginia is today a small, residential, full-time, coeducational university. It is a state university, accredited by the Southern Association of Colleges and Schools and drawing seventy percent of its undergraduates from Virginia. It is also national and international in character and contribution, enrolling students from throughout the nation, many foreign countries, and varied backgrounds.

William and Mary is primarily an undergraduate institution, providing a liberal education that is rounded and thorough, preparing its students to live and to make a living. All students gain a broad base of understanding and knowledge in arts and sciences in their freshman and sophomore years. In their junior and senior years, they may pursue work toward the bachelor of arts or bachelor of science degrees in a full range of concentrations in arts and sciences or education, or they may enter a program of study in the School of Business Administration leading to the Bachelor of Business Administration degree.

The College also provides opportunity for its students to pursue graduate work compatible with the liberal undergraduate program. Advanced studies are offered in several fields in the arts and sciences leading to the master of arts and master of science degrees, and in history and physics leading to the Ph.D. degree. In the professional schools, the J.D. degree is offered by the Marshall-Wythe School of Law; the Master of Business Administration degree by the School of Business Administration; and the Master of Arts in Education degree, the Master of Education degree, the Certificate of Advanced Study and the Doctor of Education degree by the School of Education. The School of Marine Science offers programs leading to the Master of Arts and Ph.D. degrees.

A Commitment to Liberal Education

The College's commitment in all programs to liberal education is the source of institutional coherence. William and Mary emphasizes, in its undergraduate, graduate and professional programs, the development of the student as a whole individual. The criterion of excellence in teaching and learning, in class and out of class, is at the heart of the educational process. With such objectives, and with a selective and limited enrollment, the College strives to provide its students with a quality education, and to make a significant contribution to the Commonwealth of Virginia and to the nation through the development of independent, responsive and responsible individuals. Faculty, students, and administrators work closely together to create this educational environment, under the leadership of the Board of Visitors and with the support of the Board of the Society of the Alumni.

Continuing exploration of and participation in innovative and experimental approaches to teaching and learning are a significant aspect of the College's forward movement, and emphasis on research and high quality graduate programs contributes strongly to the development of excellence at William and Mary.

A Wide Range of Courses, Seminars, and Programs

The College offers a wide range of courses, seminars, and programs to adults, both for credit and non-credit, in the evening and during the day, at its Williamsburg campus and at the Virginia Associated Research Campus in Newport News during the regular academic year and through the summer. This contribution to the educational enrichment of the citizens of Virginia throughout their careers is provided by the professional schools of education, business, and law, and by the faculty of arts and sciences. It is in keeping with the College's commitment, as a State institution, to community service and enhanced educational opportunities for the adult citizens of the State of Virginia, and for its more than 27,000 located alumni.

William and Mary is a college community, small enough to provide for relationships that allow true teaching and learning, large enough to have the resources to achieve

OBJECTIVES

excellence. An important aspect of this community is the location of the College in the beautiful and historic city of Williamsburg, where it constitutes an integral part of the restoration of Colonial Williamsburg. The partnership of the College, the City, and the Restoration, and the educational, cultural and recreational opportunities afforded to all students at the College by this partnership add to the quality of life and the quality of education at William and Mary.



PRESIDENTS OF THE COLLEGE

JAMES BLAIR, 1693–1743	THOMAS RODERICK DEW, 1836–1846
WILLIAM DAWSON, 1743–1752	ROBERT SAUNDERS, 1847–1848
WILLIAM STITH, 1752–1755	BENJAMIN S. EWELL, 1848–1849
THOMAS DAWSON, 1755–1760	JOHN JOHNS, 1849–1854
WILLIAM YATES, 1761–1764	BENJAMIN S. EWELL, 1854–1888
JAMES HORROCKS, 1764–1771	LYON G. TYLER, 1888–1919
JOHN CAMM, 1771–1777	JULIAN A. C. CHANDLER, 1919–1934
JAMES MADISON, 1777–1812	JOHN STEWART BRYAN, 1934–1942
JOHN BRACKEN, 1812–1814	JOHN EDWIN POMFRET, 1942–1951
JOHN AUGUSTINE SMITH, 1814–1826	ALVIN DUKE CHANDLER, 1951–1960
WILLIAM H. WILMER, 1826–1827	DAVIS YOUNG PASCHALL, 1960–1971
ADAM EMPIE, 1827–1836	THOMAS ASHLEY GRAVES, JR., 1971

CHANCELLORS OF THE COLLEGE

HENRY COMPTON, <i>Bishop of London</i> , 1693–1700
THOMAS TENISON, <i>Archbishop of Canterbury</i> , 1700–1707
HENRY COMPTON, <i>Bishop of London</i> , 1707–1713
JOHN ROBINSON, <i>Bishop of London</i> , 1714–1721
WILLIAM WAKE, <i>Archbishop of Canterbury</i> , 1721–1729
EDMUND GIBSON, <i>Bishop of London</i> , 1729–1736
WILLIAM WAKE, <i>Archbishop of Canterbury</i> , 1736–1737
EDMUND GIBSON, <i>Bishop of London</i> , 1737–1748
THOMAS SHERLOCK, <i>Bishop of London</i> , 1749–1761
THOMAS HAYTER, <i>Bishop of London</i> , 1762
CHARLES WYNDHAM, <i>Earl of Egremont</i> , 1762–1763
PHILIP YORKE, <i>Earl of Harwicke</i> , 1764
RICHARD TERRICK, <i>Bishop of London</i> , 1764–1776
GEORGE WASHINGTON, <i>First President of the United States</i> , 1788–1799
JOHN TYLER, <i>Tenth President of the United States</i> , 1859–1862
HUGH BLAIR GRIGSBY, <i>Historian</i> , 1871–1881
JOHN STEWART BRYAN, <i>Twentieth President of the College of William and Mary</i> , 1942–1944
COLGATE W. DARDEN, JR., <i>Governor of Virginia</i> , 1946–1947
ALVIN DUKE CHANDLER, <i>Twenty-second President of the College of William and Mary</i> , 1962–1974

BOARD OF VISITORS

JOHN R. L. JOHNSON, JR.
FREDERICK DEANE, JR.
MRS. GEORGE FALCK

RECTOR
VICE RECTOR
SECRETARY

Term expires March 6, 1978

JOHN BRUCE BREDIN
MRS. CARTER C. CHINNIS
T. C. CLARKE
FREDERICK DEANE, JR.
MRS. GEORGE FALCK
JOHN R. L. JOHNSON, JR.
AUBREY MASON
MISS ANNE DOBIE PEEBLES
A. ADDISON ROBERTS
DR. GEORGE SANDS

GREENVILLE, DEL.
ALEXANDRIA, VA.
NORFOLK, VA.
RICHMOND, VA.
McLEAN, VA.
CHADDS FORD, PA.
LYNCHBURG, VA.
CARSON, VA.
PHILADELPHIA, PA.
WILLIAMSBURG, VA.

Term expires March 6, 1979

WILLIAM S. HUBARD
JAMES E. KILBOURNE

ROANOKE, VIRGINIA
PETERSBURG, VIRGINIA

Term expires March 6, 1980

JOSEPH EDWARD BAKER
EDWARD E. BRICKELL
MILTON L. DREWES, JR.
HERBERT V. KELLY
RAYMOND T. WALLER

NORFOLK, VA.
VIRGINIA BEACH, VA.
ARLINGTON, VA.
NEWPORT NEWS, VA.
RICHMOND, VA.

STANDING COMMITTEES OF THE BOARD OF VISITORS

EXECUTIVE COMMITTEE: Mr. J. R. L. Johnson, Jr., Chairman; Mr. Frederick Deane, Jr., Mrs. Carter Chinnis, Mrs. George Falck, Mr. William Hubard, Dr. George Sands.

COMMITTEE ON FINANCE: Mr. Frederick Deane, Jr., Chairman; Mr. J. Bruce Bredin, Mr. T. C. Clarke, Mr. Milton L. Drewes, Jr., Mr. Herbert Kelly, Mr. Aubrey Mason, Mr. Raymond T. Waller.

COMMITTEE ON BUILDINGS AND GROUNDS: Mrs. George Falck, Chairman; Mr. Joseph Baker, Dr. Edward Brickell, Mr. J. Bruce Bredin, Mr. T. C. Clarke, Mr. Milton Drewes, Dr. James E. Kilbourne.

COMMITTEE ON ACADEMIC AFFAIRS: Dr. George Sands, Chairman; Mr. J. Bruce Bredin, Dr. Edward Brickell, Mr. Aubrey Mason, Miss Anne Dobie Peebles, Mr. A. Addison Roberts, Mr. Raymond T. Waller.

COMMITTEE ON HONORARY DEGREES: Mr. John R. L. Johnson, Jr., Chairman; Mr. T. C. Clarke, Mr. Aubrey Mason, Mr. Frederick Deane, Mr. Milton L. Drewes, Mr. Herbert Kelly, Miss Anne Dobie Peebles.

COMMITTEE ON STUDENT AFFAIRS: Mrs. Carter Chinnis, Chairman; Mr. Joseph Baker, Dr. Edward Brickell, Mrs. George Falck, Mr. William Hubard, Dr. James Kilbourne, Dr. George Sands.

COMMITTEE ON DEVELOPMENT AND ALUMNI AFFAIRS: Mr. William Hubard, Chairman; Mr. Joseph Baker, Mrs. Carter Chinnis, Mr. Herbert Kelly, Dr. James Kilbourne, Mr. Raymond T. Waller, Mr. A. Addison Roberts.

DIRECTORY OF ADMINISTRATIVE OFFICES¹

Office of the President

Thomas A. Graves, Jr.	<i>President</i>
James S. Kelly	<i>Assistant to the President</i>
Ross L. Weeks, Jr.	<i>Assistant to the President</i>
Wesley C. Wilson	<i>Assistant to the President</i>
Paul V. Koehly	<i>Internal Auditor</i>
Jane Latham	<i>Recording Secretary, Board of Visitors</i>
Diana C. Love	<i>Secretary</i>

Office of the Vice President for Academic Affairs

George R. Healy	<i>Vice President for Academic Affairs</i>
Shirley C. Peterson	<i>Administrative Assistant</i>
Nell R. Jones	<i>Administrative Assistant</i>
James C. Livingston	<i>Dean of the Undergraduate Program</i>
Henry Aceto, Jr.	<i>Director, Virginia Associated Research Campus</i>
Carson H. Barnes, Jr.	<i>Director, Office of Special Programs</i>
Paul N. Clem	<i>Director, Summer Session and Evening College</i>
	<i>Librarian</i>
Robert T. Siegel	<i>Director of SREL</i>
Henry C. Johnson	<i>Registrar and Director of Automated Data Processing</i>

Faculty of Arts and Sciences

Jack D. Edwards	<i>Dean</i>
David E. Kranbuehl	<i>Associate Dean</i>
John E. Selby	<i>Graduate Dean</i>

Marshall-Wythe School of Law

William B. Spong, Jr.	<i>Dean</i>
Timothy J. Sullivan	<i>Associate Dean for Administration</i>
Richard A. Williamson	<i>Associate Dean for Admissions</i>

School of Business Administration

Charles L. Quittmeyer	<i>Dean</i>
William E. O'Connell, Jr.	<i>Associate Dean for Graduate Studies</i>
Anthony L. Sancetta	<i>Associate Dean for Undergraduate Studies</i>

School of Education

James M. Yankovich	<i>Dean</i>
Robert Emans	<i>Associate Dean</i>

School of Marine Science

William J. Hargis, Jr.	<i>Dean</i>
John L. Wood	<i>Associate Director</i>
Michael E. Bender	<i>Assistant Director</i>
Maurice P. Lynch	<i>Assistant Director</i>
John M. Zeigler	<i>Assistant Director</i>

¹For September 1, 1977 (as of 6/1/77)

DIRECTORY OF ADMINISTRATIVE OFFICES

Office of the Dean of the Undergraduate Program

James C. Livingston	<i>Dean of the Undergraduate Program</i>
W. Samuel Sadler	<i>Dean of Students</i>
Susan J. Deery	<i>Associate Dean for Student Development</i>
John D. Morgan	<i>Associate Dean for Residence Hall Life</i>
Leroy O. Moore	<i>Associate Dean for Minority Student Affairs</i>
Kenneth E. Smith, Jr.	<i>Associate Dean for Student Activities and Organizations</i>
Robert P. Hunt	<i>Dean of Admissions</i>
Jay Lee Chambers	<i>Director of the Center for Psychological Services</i>
John C. Bright	<i>Director of Veteran Affairs</i>
E. Leon Looney	<i>Director of Student Aid</i>
Harriet Reid	<i>Director of the Office of Career Counseling</i>

Office of Admissions

Robert P. Hunt	<i>Dean of Admissions</i>
Rex Tillotson	<i>Associate Dean of Admissions</i>
Kristine Aulenbach	<i>Assistant Dean of Admissions</i>
Juanita W. Wallace	<i>Assistant Dean of Admissions</i>

Office of the Registrar

Henry C. Johnson	<i>Registrar and Director of Automated Data Processing</i>
Charles R. Toomajian, Jr.	<i>Director of Registration and Student Records</i>
Dorothy Bryant	<i>Assistant Registrar</i>

Earl Gregg Swem Library

Alva W. Stewart	<i>Librarian</i>
	<i>Associate Librarian</i>

Office of Institutional Research

Charles R. Toomajian	<i>Director, Institutional Research</i>
Jean C. Keating	<i>Assistant Director, Institutional Research</i>
Willa B. Chambers	<i>Statistician</i>

Automated Data Processing

Henry C. Johnson	<i>Director, Automated Data Processing</i>
Raymond W. Southworth	<i>Director, Computer Center</i>

Space Radiation Effects Laboratory

Robert T. Siegel	<i>Director of SREL</i>
------------------	-------------------------

Student Health Services

Richard D. Cilley	<i>Director, Student Health Services</i>
-------------------	--

DIRECTORY OF ADMINISTRATIVE OFFICES

Center for Psychological Services

Jay L. Chambers

Director

Office of the Vice President for Business Affairs

William J. Carter
Dennis K. Cogle

Vice President for Business Affairs
Assistant to the Vice President for Business Affairs
and Director of the Budget

Rebecca L. Covey
William T. Allen
Ervin D. Farmer
James J. Connolly
Harvey P. Gunson
David G. Healy
H. Lester Hooker, Jr.
Bruce W. Locke
Irving H. Robitshek
Floyd E. Whitaker
Kenneth Greene
Willard C. Sterling, Jr.
Gladys A. Campbell
Frances Meadows
Martha M. Muntean
Janie P. Reid

Assistant Director of the Budget
Director of Purchases and Stores
Director of Buildings and Grounds
Assistant Director of Buildings and Grounds
Director of Security
Director of Auxiliary Enterprises
Director of William and Mary Hall
Manager, College Bookstore
Director of Personnel
Treasurer
Assistant to the Treasurer
Controller
Supervisor of Student Loan Accounts
Supervisor of Student Accounts
Supervisor of College Payroll Office
Chief Accountant

Office of the Vice President for College Development

Warren Heemann
Stanley E. Brown
Leonard A. Meyer

Vice President for College Development
Director for Corporate Relations and Placement

Michael R. Schoenenberger

Director for Annual Giving
Director for Sponsored Programs
Director for Special Gifts

Director, Office of Grants and Research
Contracts

Office of Information Services

Ross L. Weeks
Barbara S. Ball
Marjorie N. Healy
James C. Rees
S. Dean Olson
Eleanor R. Anderson
Fred L. Wallace

Director, Information Services
Director, News Office
News Editor
News Officer
Director of Publications
Publications Officer
Supervisor, Printing Office

Department of Athletics

Ben L. Carnevale
Edmund T. Derringe
Barry G. Fratkin
Robert A. Sheeran

Director of Athletics
Business Manager Executive
Director of Athletic Educational Foundation
Sports Information Director

DIRECTORY OF ADMINISTRATIVE OFFICES

William and Mary Hall

H. Lester Hooker, Jr.
Bettie S. Adams

Director of William and Mary Hall
Assistant Director of William and Mary Hall



President Graves

FACULTY¹

- THOMAS A. GRAVES, JR., *President of the College*. B.A. Yale University; M.B.A. and D.B.A., Harvard University; LL.D., University of Pennsylvania; Litt.D., College of Charleston.
- GEORGE R. HEALY, *Vice President for Academic Affairs*, B.A., Oberlin College; M.A. and Ph.D., University of Minnesota.
- CHARLES HARPER ANDERSON (1957, 1946), *Lecturer in Law, Emeritus*. A.B. and B.C.L., College of William and Mary; LL.M., University of Virginia.
- ALFRED R. ARMSTRONG (1961, 1933), *Professor of Chemistry, Emeritus*, B.S., and M.A., College of William and Mary; Ph.D., University of Virginia.
- THOMAS CONNER ATKESON (1954, 1954), *Chancellor Professor of Taxation, Emeritus*. B.S., M.S. and Ph.D., Georgetown University.
- J. WORTH BANNER (1965, 1949, 1964), *Professor of Modern Languages, Emeritus*. B.S., Roanoke College; M.A. and Ph.D., University of North Carolina.
- RICHARD B. BROOKS (1967, 1947, 1967), *Professor of Education, Emeritus*. B.P.E., Springfield College (Massachusetts); M.A., University of Pennsylvania; Ed.D., University of Virginia.
- EMILY ELEANOR CALKINS (1953, 1927), *Associate Professor of Mathematics, Emeritus*. A.B., College of William and Mary; M.A., University of Michigan.
- LESTER J. CAPPON (1946, 1946), *Lecturer in History, Emeritus*. A.B. and M.A., University of Wisconsin; M.A. and Ph.D., Harvard University.
- HIBBERT DELL COREY (1943, 1929), *Professor of Business Administration, Emeritus*. A.B., University of Michigan; M.A., Ohio State University.
- GEORGE W. CRAWFORD (1972, 1960), *Professor of Physics, Emeritus*. B.S., Davidson College; M.S., University of North Carolina; Ph.D., Ohio State University.
- FRANK BROOKE EVANS, III (1961, 1947), *Professor of English, Emeritus*. A.B., Amherst College; M.A. and Ph.D., Princeton University.
- CARL A. FEHR (1961, 1945), *Chancellor Professor of Music, Emeritus*. A.B. and M.A., University of Texas; M.Mus., University of Michigan; Ed.D., Columbia University.
- WAYNE FULTON GIBBS (1931, 1926), *Professor of Accountancy, Emeritus*. B.S. and M.S., University of Illinois; C.P.A.
- T. CARTER GLEYSTEN (1973, 1970), *Lecturer in Business Administration, Emeritus*. A.B., Yale University.
- ALBERT E. HAAK (1971, 1947), *Professor of Theatre and Speech, Emeritus*. A.B., Lawrence College; M.A., College of William and Mary.
- E. LEWIS HOFFMAN (1968, 1947), *Professor of Modern Languages, Emeritus*. B.S., Roanoke College; M.A. and Ph.D., George Washington University.
- THOMAS H. JOLLS (1968, 1968), *Professor of Law, Emeritus*. A.B. and J.D., University of Michigan.
- W. MELVILLE JONES (1953, 1928), *Chancellor Professor of English, Emeritus*. A.B., Allegheny College; M.A., Ohio State University; Ph.D., Harvard University.
- ALEXANDER I. KURTZ (1967, 1962), *Associate Professor of Modern Languages, Emeritus*. Licentiate and M.A., Leopold-Francis University, Innsbruck, Austria; M.A., Rutgers University; Th.D., Leopold-Francis University.
- J. WILFRED LAMBERT (1959, 1931), *Professor of Psychology, Emeritus*. A.B., College of William and Mary.
- FRANK A. MACDONALD (1955, 1955), *Professor of Philosophy, Emeritus*. A.B. and M.A., College of William and Mary; M.A., Harvard University.
- JEAN STEWART MAJOR (1928, 1928), *Associate Professor of Home Economics, Emeritus*. B.S. and M.A., Columbia University.
- CHARLES F. MARSH (1968, 1930, 1968), *Lecturer in Business Administration, Emeritus*. A.B., Lawrence College; M.A. and Ph.D., University of Illinois.

¹The first date indicates the year when the present rank was attained; the second date the year when the individual was first appointed to the staff. A third date indicates the year of reappointment. This list is a record of all faculty of the College for the academic year 1977-78, as of June 1, 1977.

FACULTY

- CARL W. MCCARTHA (1965, 1955), *Professor of Education, Emeritus*. A.B., Newberry College; M.A., University of North Carolina; Ed.D., University of Florida.
- BEN CLYDE MCCARY (1968, 1930), *Professor of Modern Languages, Emeritus*. A.B., University of Richmond; Docteur de l'Université de Toulouse.
- WILLIAM WARNER MOSS, JR. (1937, 1937), *John Marshall Professor of Government and Citizenship, Emeritus*. A.B., University of Richmond; M.A., and Ph.D., Columbia University.
- BRUCE T. MCCULLY (1961, 1940), *Professor of History, Emeritus*. A.B., Rutgers University; M.A. and Ph.D., Columbia University.
- FRASER NEIMAN (1958, 1938), *Professor of English, Emeritus*. A.B., Amherst College; M.A. and Ph.D., Harvard University.
- DAVIS Y. PASCHALL (1960, 1960), *President of the College, Emeritus*. A.B., M.A., College of William and Mary; Ed.D., University of Virginia.
- ARTHUR WARREN PHELPS (1945, 1945), *Professor of Law, Emeritus*. A.B., Washington and Lee University; M.A., Ohio State University; J.D., University of Cincinnati; LL.M., Columbia University.
- MARCEL REBOUSSIN (1962, 1946), *Professor of Modern Languages, Emeritus*. Professorat de français, Ecole Normale Supérieure de St. Cloud; M.A., Columbia University; Agrégé des lettres, Sorbonne, Paris.
- MARION DALE REEDER (1967, 1943), *Professor of Physical Education for Women, Emeritus*. B.S. and M.S., University of Illinois.
- EDWARD MILES RILEY (1963, 1963), *Lecturer in History, Emeritus*. A.B., Washington and Lee University; M.A. and Ph.D., University of Southern California.
- GORDON B. RINGGOLD (1963, 1946), *Professor of Modern Languages, Emeritus*. A.B., Denison University; M.A., Middlebury College; Ph.D., Georgetown University.
- HOWARD M. SCAMMON, JR. (1967, 1948), *Professor of Theatre and Speech, Emeritus*. A.B., College of William and Mary; M.A., Northwestern University.
- ROGER SHERMAN (1974, 1946, 1966), *Professor of Theatre and Speech, Emeritus*. A.B., College of William and Mary.
- GRACE M. SMITH (1966, 1966), *Associate Professor of Education, Emeritus*. A.B. and M.Ed., University of Virginia.
- BERNICE M. SPEESE (1969, 1946), *Associate Professor of Biology, Emeritus*. B.S. and M.A., College of William and Mary; Ph.D., University of Virginia.
- HOWARD STONE (1963, 1948), *Professor of Modern Languages, Emeritus*. A.B., Pomona College; M.A., Claremont Graduate School and University Center; Ph.D., University of California, Berkeley.
- ALBION GUILFORD TAYLOR (1928, 1927), *Chancellor Professor of Political Economy, Emeritus*. A.B., Des Moines University; M.A., University of Nebraska; Ph.D., University of Illinois.
- ALMA L. WILKIN (1957, 1928), *Associate Professor of Home Economics, Emeritus*. B.S., Kansas State University; M.A., Teachers College, Columbia University.
- MARGARET WINDER (1959, 1948, 1959), *Assistant Professor of Education, Emeritus*. B.S., Madison College; M.A., College of William and Mary.
- BURTON M. WOODWARD (1969, 1969), *Associate Professor of Business Administration, Emeritus*. A.B., M.B.A., and Ph.D., University of Florida.
- WALTER S. ZIMMERMANN (1966, 1966), *Associate Professor of Modern Languages, Emeritus*. B.S. and Ph.D., New York University.
- ALAN I. ABRAMOWITZ (1976, 1976), *Assistant Professor of Government*. B.A., University of Rochester; M.A., and Ph.D., Stanford University.
- HENRY ACETO, JR. (1976, 1970), *Professor of Biology*. B.S., State University of New York, Albany; M.S., University of California, Berkeley; Ph.D., University of Texas.
- FRED L. ADAIR (1971, 1971), *Associate Professor of Education*. B.S., University of North Carolina; M.A.T., Duke University; Ph.D., University of North Carolina.
- JOSEPH S. AGEE (1969, 1968), *Associate Professor of Physical Education for Men*. B.S. and M.Ed., College of William and Mary.

FACULTY

- ALAN F. ALBERT (1974, 1971), *Assistant Professor of Physical Education for men*. A.B. and M.Ed., College of William and Mary.
- NATHAN ALTSHULER (1967, 1960), *Professor of Anthropology*. A.B., University of Michigan; Ph.D., Harvard University.
- CARL M. ANDERSEN (1972, 1967), *Senior Research Associate in Mathematics and Computer Science*. B.S. and M.S., University of Michigan; Ph.D., University of Pennsylvania.
- ROGER D. ANDERSON (1975, 1975), *Associate Professor of Marine Science*. B.A., St. Olaf College; M.S., Texas A&M University; Ph.D., Texas A&M University.
- JAY D. ANDREWS (1959, 1946), *Professor of Marine Science*. B.S., Kansas State College; M.S. and Ph.D., University of Wisconsin.
- LYLE E. ANGENE (1977, 1977), *Visiting Associate Professor of Philosophy*. B.A. and M.A., Ohio State University; Ph.D., University of Chicago.¹
- M. JOY ARCHER (1972, 1968), *Associate Professor of Physical Education for Women*. B.S., Skidmore College; M.Ed., College of William and Mary.
- ROBERT ARCHIBALD (1976, 1976), *Assistant Professor of Economics*. B.A., University of Arizona; M.S. and Ph.D., Purdue University.
- VICKIE BABENKO (1977, 1974), *Associate Professor of Modern Languages*. Ph.D., University of Hamburg.
- ELISABETH E. BACKHAUS (1974, 1966), *Associate Professor of Modern Languages*. A.B., M.A. and Ph.D., University of Connecticut.
- SAMUAL H. BAKER, III (1973, 1969), *Associate Professor of Economics*. B.S., Hampden-Sydney College; Ph.D., University of Virginia.
- DONALD L. BALL (1976, 1960), *Professor of English*. A.B., University of Richmond; M.A., University of Delaware; Ph.D., University of North Carolina, Chapel Hill.
- CAROL E. BALLINGALL (1970, 1965), *Associate Professor of Anthropology*. A.B., Wayne State University; M.A., University of Chicago.
- NORMAN F. BARKA (1970, 1965), *Associate Professor of Anthropology*. A.B., Beloit College; M.A. and Ph.D., Harvard University.
- WILLIAM D. BARNES (1975, 1975), *Instructor in Fine Arts*. B.F.A., Drake University; M.F.A., University of Arizona.
- JAMES R. BARON (1976, 1971), *Associate Professor of Classical Studies*. A.B., Catholic University; M.A. and Ph.D., University of Minnesota.
- ROBERT A. BARRY (1972, 1964), *Associate Professor of Economics*. A.B., Stanford University; Ph.D., Yale University.
- GEORGE M. BASS, JR. (1976, 1976), *Assistant Professor of Education*. B.A., Yale University; Ph.D., University of Minnesota.
- DONALD J. BAXTER (1973, 1967), *Associate Professor of Government*. A.B., Sacramento State College; M.A. and Ph.D., Syracuse University.
- KATHERINE C. BAZAN (1977, 1977), *Visiting Assistant Professor of Economics*. B.A., College of William and Mary.¹
- RUTH A. BECK (1973, 1969), *Assistant Professor of Biology*. A.B., Radford College; M.Ed., University of Virginia.
- LAWRENCE S. BECKHOUSE (1968, 1968), *Associate Professor of Sociology*. A.B., Knox College; M.A. and Ph.D., Vanderbilt University.
- JAMES W. BEERS (1977, 1977), *Assistant Professor of Education*. B.A., Johns Hopkins University; M.A. and Ph.D., University of Virginia.
- EUNICE BELGUM (1976, 1976), *Assistant Professor of Philosophy*. B.A., St. Olaf College; M.A. and Ph.D., Harvard University.

¹1977-78 only.

FACULTY

- MICHAEL E. BENDER (1970, 1970), *Associate Professor of Marine Science*. B.A., Southern Illinois University; M.S., Michigan State University; Ph.D., Rutgers University.
- STEPHEN BENHAM (1975, 1975), *Assistant Professor of Geology*. B.S., Washington State University; A.M., Indiana University.
- JAMES B. BERRYHILL (1971, 1971), *Instructor in Physical Education for Men*. B.S., Old Dominion College; M.Ed., Western Maryland College.
- R. CARLYLE BEYER (1965, 1965), *Professor of History*. A.B., Hamline University; A.B. and M.A., Oxford University; Ph.D., University of Minnesota.
- KENNETH F. BICK (1966, 1961), *Professor of Geology*. B.S., M.S. and Ph.D., Yale University.
- RUDOLF H. BIERI (1972, 1972), *Associate Professor of Marine Science*. Ph.D., Gutenberg University.
- ROBERT E. L. BLACK (1965, 1959), *Professor of Biology and Marine Science*. A.B., William Jewell College; Ph.D., University of Washington.
- JERRY H. BLEDSOE (1971, 1971), *Associate Professor of Theatre and Speech*. A.B., University of Colorado; M.A., University of California, Los Angeles; Ph.D., Purdue University.
- RICHARD M. BLOCH (1972, 1972), *Lecturer in Psychology*. B.S., University of Pittsburgh; M.A. and Ph.D., University of Wisconsin.
- ROBERT BLOOM (1976, 1976), *Assistant Professor of Business Administration*. B.A., Queens College of the City University of New York; M.B.A., Columbia University; Ph.D., New York University.
- ROBERT B. BLOOM (1976, 1973), *Associate Professor of Education*. B.S., University of Chicago; M.A., Northeastern Illinois University; Ph.D., University of Minnesota.
- DONALD F. BOESCH (1972, 1972), *Assistant Professor of Marine Science*. B.S., Tulane University; Ph.D., William and Mary.
- F. ROBERT BOHL, JR. (1972, 1972), *Assistant Professor of Philosophy*. A.B., Rutgers University; M.A. and Ph.D., Brown University.
- JOHN D. BOON, III (1975, 1975), *Assistant Professor of Marine Science*. B.A., Rice University; M.A. and Ph.D., College of William and Mary.
- ERIC L. BRADLEY (1977, 1971), *Associate Professor of Biology*. A.B., San Fernando Valley State College; Ph.D., University of California, Santa Barbara.
- FRANCES BREEZE (1975, 1975), *Lecturer in Music*.
- THOMAS C. BRICKHOUSE (1977, 1977), *Visiting Assistant Professor of Philosophy*. B.A., Washington and Lee University; M.A., and Ph.D., Vanderbilt University.¹
- JOHN WILLIAM BRIDGE (1977, 1977), *Visiting Professor of Law*. LL.B., LL.M. and Ph.D., University of Bristol, England.¹
- DENIS J. BRION (1976, 1975), *Assistant Professor of Law*. B.S., Northwestern University; J.D., University of Virginia.
- GARNETT R. BROOKS, JR. (1973, 1962), *Professor of Biology*. B.S. and M.S., University of Richmond; Ph.D., University of Florida.
- MARION M. BROWN (1976, 1966), *Associate Professor of Theatre and Speech*. A.B. and M.A., University of California at Los Angeles.
- RONALD C. BROWN (1975, 1970), *Professor of Law*. B.S., University of Toledo; J.D., University of Toledo Law School; LL.M., University of Michigan Law School.
- STEPHEN B. BRUSH (1973, 1973), *Assistant Professor of Anthropology*. A.B., University of California, Berkeley; M.A. and Ph.D., University of Wisconsin, Madison.
- JOHN J. BUCKLEY (1976, 1976), *Assistant Professor of Education*. B.A. and M.A., Pepperdine University.
- G. WILLIAM BULLOCK, JR. (1977, 1967), *Professor of Education*. A.B., Lynchburg College; M.Ed. and Ed.D., University of Virginia.

¹1977-78 only.

FACULTY

- EUGENE BURRESON (1977, 1977), *Assistant Professor of Marine Science*. B.S., Eastern Oregon College; M.S. and Ph.D., Oregon State University.
- WILLIAM L. BYNUM (1971, 1969), *Associate Professor of Mathematics and Computer Science*. B.S., Texas Technological College; M.A. and Ph.D., University of North Carolina, Chapel Hill.
- MITCHELL A. BYRD (1963, 1956), *Professor of Biology*. B.S., M.S. and Ph.D., Virginia Polytechnic Institute.
- ROBERT J. BYRNE (1969, 1969), *Associate Professor of Marine Science*. M.S. and Ph.D., University of Chicago.
- CRAIG N. CANNING (1973, 1973), *Assistant Professor of History*. A.B., University of Utah; M.A. and Ph.D., Stanford University.
- GREGORY M. CAPELLI (1974, 1974), *Assistant Professor of Biology*. B.S., St. Louis University; M.S. and Ph.D., University of Wisconsin.
- MIRIAM CARDI (1976, 1973), *Clinical Psychologist and Lecturer in Psychology*. B.S., M.A., and Ph.D., Ohio State University.
- CARL E. CARLSON (1977, 1972), *Associate Professor of Physics*. A.B. and Ph.D., Columbia University.¹
- STEPHEN R. CARLSON (1976, 1976), *Lecturer in Music*, B.S., The University of Minnesota; M.M., The University of Michigan.
- BERNARD L. CARNEVALE (1972, 1972), *Professor of Physical Education for Men*. B.S., New York University; M.S. University of North Carolina, Chapel Hill.
- MICHAEL CASTAGNA (1973, 1973), *Assistant Professor of Marine Science*. B.S. and M.S., Florida State University.
- BENJAMIN RALPH CATO, JR. (1972, 1955), *Professor of Mathematics and Computer Science*. A.B. and M.A., Duke University.
- LOUIS E. CATRON (1974, 1966), *Professor of Theatre and Speech*. A.B., Millikin University; M.A. and Ph.D., Southern Illinois University.
- JAY LEE CHAMBERS (1972, 1970), *Professor of Psychology*. A.B., George Washington University; M.A. and Ph.D., University of Kentucky.
- ROY L. CHAMPION (1971, 1967), *Associate Professor of Physics*. B.S. and M.S., North Carolina State University at Raleigh; Ph.D., University of Florida.
- MILES L. CHAPPELL (1977, 1971), *Associate Professor of Fine Arts*. B.S., College of William and Mary; Ph.D., University of North Carolina, Chapel Hill.
- HSUAN SHAN CHEN (1976, 1976), *Assistant Professor of Marine Science*. B.S. and M.S., National Taiwan University; S.M. and Ph.D., Massachusetts Institute of Technology.
- ROYCE W. CHESSER (1971, 1962), *Professor of Education*. A.B., Wake Forest University; M.Ed., College of William and Mary.
- THOMAS W. CHRIST (1971, 1971), *Assistant Professor of Sociology*. A.B., College of William and Mary; M.S. and Ph.D., Cornell University.
- PAUL N. CLEM (1968, 1959), *Professor of Education*. A.B., Bridgewater College; M.A. and Ed.D., Michigan State University.
- STEPHEN C. CLEMENT (1977, 1964), *Professor of Geology*. A.B., Cornell University; M.S., University of Utah; Ph.D., Cornell University.
- MARILYNN R. CLOUTIER (1977, 1977), *Acting Assistant Professor of Modern Languages*. B.A., Mills College; M.A. and Ph.D., University of Wisconsin.²
- PAUL P. CLOUTIER (1975, 1972), *Associate Professor of Modern Languages*. A.B., University of Massachusetts; M.A. and Ph.D., University of Wisconsin.
- WILLIAM S. COBB, JR. (1969, 1967), *Associate Professor of Philosophy*. A.B., Wake Forest University; B.D., Union Theological Seminary, New York; Ph.D., Vanderbilt University.²

¹On leave, 1977-78.

²1977-78 only.

FACULTY

- JAMES W. COKE (1976, 1957), *Professor of Modern Languages*. A.B., Western Kentucky University; M.A. and Ph.D., Indiana University.
- GEORGE D. COLE, JR. (1972, 1968), *Associate Professor of Business Administration*. A.B., Duke University; B.D., Yale University; Ed.D., Columbia University.
- HENRY E. COLEMAN (1972, 1964), *Associate Professor of Fine Arts*. A.B., College of William and Mary; M.A., State University of Iowa.
- RANDOLPH A. COLEMAN (1976, 1970), *Associate Professor of Chemistry*. A.B., Susquehanna University; Ph.D., Purdue University.
- TOM A. COLLINS (1976, 1970), *Professor of Law*. A.B., Indiana University; J.D., Indiana University-Indianapolis Law School; LL.M., University of Michigan Law School.
- JOHN W. CONLEE (1972, 1968), *Associate Professor of English*. A.B., University of Southern California; M.A. and Ph.D., University of Illinois.
- LUTHER THOMAS CONNER, JR. (1974, 1964), *Associate Professor of Mathematics and Computer Science*. B.S., Virginia Polytechnic Institute; M.A., University of North Carolina, Chapel Hill.
- CLIFTON FORBES CONRAD (1977, 1977), *Associate Professor of Education*. A.B. and A.M., University of Kansas; Ph.D., University of Michigan.
- BRADNER W. COURSEN (1969, 1968), *Professor of Biology*. A.B., Drew University; M.S. and Ph.D., University of Maryland.
- COLIN R. COX (1972, 1972), *Research Associate in Physics*. A.B. and Ph.D., Oxford University.
- R. MERRITT COX (1977, 1972), *Professor of Modern Languages*. A.B., University of Richmond; M.A. and Ph.D., University of Wisconsin.
- M. BOYD COYNER, JR. (1972, 1969), *Professor of History*. A.B., M.A., and Ph.D., University of Virginia.
- EDWARD P. CRAPOL (1971, 1967), *Associate Professor of History*. B.S., State University of New York at Buffalo; M.S. and Ph.D., University of Wisconsin.
- PATRICIA B. CROWE (1971, 1965), *Associate Professor of Physical Education for Women*. B.S., Sargent College, Boston University; M.S. and Ed.D., University of North Carolina, Greensboro.
- FREDERIC R. CROWFIELD, JR. (1968, 1956), *Professor of Physics*. A.B., Harvard College; M.S. and Ph.D., Lehigh University.
- CHARLES T. CULLEN (1971, 1971), *Lecturer in History*. A.B., University of the South; M.S., Florida State University; Ph.D., University of Virginia.
- GEORGE M. CURTIS, III (1974, 1974), *Lecturer in History*. A.B., State University of Iowa; M.A., University of Kansas; Ph.D., University of Wisconsin.
- WAGIH G. DAFASHY (1969, 1965), *Associate Professor of Business Administration*. B.Com., Ein Shams University, Cairo; M.B.A., University of Texas; Ph.D., University of Arkansas.
- JAMES S. DARLING (1961, 1961), *Lecturer in Music*. A.B., Yale University; B.M., Yale University School of Music; M.M., University of Michigan.
- AVRAM DAVIDSON (1977, 1977), *Writer in Residence*.¹
- CHARLES EDWARD DAVIDSON (1964, 1949), *Professor of English*. A.B., Princeton University; M.A. and Ph.D., Yale University.
- WILLIAM F. DAVIS, JR. (1968, 1960), *Associate Professor of English*. A.B., Princeton University; M.A. and Ph.D., Yale University.
- WILLIAM JACKSON DAVIS (1963, 1963), *Associate Professor of Marine Science*, B.S., Virginia Polytechnic Institute; Ph.D., University of Kansas.
- CARL P. DAW, JR. (1977, 1970), *Associate Professor of English*. A.B., Rice University; M.A. and Ph.D., University of Virginia.
- GEORGE M. DAWES (1974, 1974), *Instructor in Marine Science*. B.A., University of Maryland.
- JAMES DEETZ (1977, 1977), *Visiting Professor of Anthropology*, B.A., M.A. and Ph.D., Harvard University.¹

¹1977-78 only.

FACULTY

- FRANCIS K. DEGGES (1973, 1973), *Instructor in Marine Science*. B.S., Hampden-Sydney College; M.S., Pennsylvania State University.
- JEWEL L. DELAUNE (1971, 1966), *Assistant Professor of Education*. A.B., M.A. and B.S. in L.S., Louisiana State University.
- JOHN B. DELOS (1977, 1971), *Associate Professor of Physics*. B.S., University of Michigan; Ph.D., Massachusetts Institute of Technology.
- PETER L. DERKS (1971, 1960), *Professor of Psychology*. A.B., Knox College; M.A., Harvard University; Ph.D., University of Pennsylvania.
- EDMUND T. DERRINGE (1970, 1957), *Assistant Professor of Physical Education for Men*. B.S., Georgetown University; M.Ed., College of William and Mary.
- ELAS S. DIDUK (1974, 1966), *Associate Professor of Modern Languages*. B.S., Temple University; M.A., Columbia University.
- CIRILA DJORDJEVIC (1972, 1968), *Professor of Chemistry*. B.S., Zagreb University; Ph.D., University College, London (England).
- KYLE E. DOLBOW (1976, 1976), *Assistant Professor of Chemistry*. B.A., College of Wooster; Ph.D., Massachusetts Institute of Technology.
- CARL R. DOLMETSCH (1967, 1959), *Professor of English*. A.B. and M.A., Drake University; Ph.D., University of Chicago.¹
- JOHN E. DONALDSON (1970, 1966), *Professor of Law*. A.B., University of Richmond; J.D., College of William and Mary; LL.M., Georgetown University.
- J. SCOTT DONALDSON (1974, 1966), *Professor of English*. A.B., Yale University; M.A. and Ph.D., University of Minnesota.²
- MICHAEL K. DONEGAN, (1973, 1973), *Assistant Professor of Mathematics and Computer Science*. A.B., M.S., and Ph.D., Rice University.
- LYNN D. DOVERSPIKE (1971, 1967), *Associate Professor of Physics*, B.S., Oklahoma State University; M.S., University of California, Los Angeles; Ph.D., University of Florida.³
- PHILLIP E. DOWNS (1975, 1975), *Assistant Professor of Business Administration*. B.S. and M.B.A., Bowling Green State University; Ph.D., University of North Carolina.
- JOHN H. DREW (1976, 1970), *Associate Professor of Mathematics and Computer Science*. B.S., Case Institute of Technology; Ph.D., University of Minnesota.
- KERMIT L. DUNAHOO (1973, 1973), *Assistant Professor of Law*. B.S., Iowa State University. M.S., Iowa State University; J.D., Drake University Law School.
- JOHN L. DUPUY (1968, 1968), *Assistant Professor of Marine Science*. B.S., Oglethorpe University; M.S., Rutgers, The State University; Ph.D., University of Washington.
- HUGH B. EASLER (1962, 1962), *Assistant Professor of Mathematics and Computer Science*. A.B., Wofford College; M.S., University of South Carolina.
- MORTON ECKHAUSE (1973, 1964), *Professor of Physics*. A.B., New York University; M.S. and Ph.D., Carnegie Institute of Technology.
- VERNON H. EDMONDS (1971, 1967), *Professor of Sociology*. A.B., Oklahoma State University; M.S., Purdue University; Ph.D., University of Missouri.
- JACK D. EDWARDS (1973, 1963), *Professor of Government*. A.B., Macalester College; LL.B., Harvard Law School; Ph.D., Vanderbilt University.
- WALDEMAR EGER (1975, 1975), *Assistant Professor of Modern Languages*. B.A., Eastern Mennonite College; M.A. and Ph.D., Indiana University.
- PIETER ELGERS (1977, 1970), *Associate Professor of Business Administration*. B.B.A., Manhattan College; M.B.A., St. John's University; C.P.A.³

¹On leave, first semester.

²On leave, second semester.

³On leave, 1977-78.

FACULTY

- NATHANIEL Y. ELLIOTT (1970, 1963), *Associate Professor of English*. B.S., State University of New York, Fredonia; M.A., Syracuse University; Ph.D., Cornell University.
- ROBERT EMANS (1976, 1976), *Professor of Education*. B.S., University of Wisconsin; M.A. and Ph.D., University of Chicago.
- KAREN A. EMDEN (1976, 1976), *Acting Assistant Professor of Business Administration*. B.A. and J.D., College of William and Mary.¹
- GERALD L. ENGEL (1973, 1973), *Assistant Professor of Marine Science*. B.S., Hampden-Sydney College; M.A., Louisiana State University; Ph.D., Pennsylvania State University.
- JULIA EPSTEIN (1977, 1977), *Instructor in English*. Degré Supérieur, Université de Strasbourg; A.B., Washington University; M.A., Cornell University.
- ANTHONY J. ESLER (1972, 1962), *Professor of History*. A.B., University of Arizona; M.A. and Ph.D., Duke University.
- JUDITH EWELL (1977, 1971), *Associate Professor of History*. A.B., Duke University; Ph.D., University of New Mexico.
- MICHAEL A. FAIA (1970, 1970), *Associate Professor of Sociology*. A.B., University of Southern California; M.A., University of Chicago; Ph.D., University of Southern California.
- CHING SENG FANG (1973, 1969), *Associate Professor of Marine Science*. B.S., National Taiwan University; M.S. and Ph.D., North Carolina State University.
- NORMAN J. FASHING (1973, 1973), *Assistant Professor of Biology*. A.B. and M.A., Chico State College; Ph.D., University of Kansas.
- ROBERT J. FEHRENBACH (1976, 1967), *Professor of English*. A.B., Westminster College, Missouri; M.A., Vanderbilt University; Ph.D., University of Missouri.
- NORMAN S. FIERING (1972, 1969), *Lecturer in History*. A.B., Dartmouth College; M.A. and Ph.D., Columbia University.
- DAVID H. FINIFTER (1973, 1973), *Assistant Professor of Economics*. B.S., Loyola College, Baltimore; M.A. and Ph.D., University of Pittsburgh.
- THOMAS M. FINN (1973, 1973), *Associate Professor of Religion*. A.B. and M.A., St. Paul's College; Th.L. and Th.D., The Catholic University of America.
- EMERIC FISHER (1969, 1964), *Professor of Law*. B.S., University of South Carolina; B.C.L. and L & T.M., College of William and Mary.
- S. STUART FLANAGAN (1973, 1968), *Associate Professor of Education*. B.S., Washington and Lee University; M.Ed. and Ed.D., University of Virginia.
- MARY LOU FLETCHER (1976, 1976), *Lecturer in Music*, B.M., Boston University.
- RICHARD G. FLOOD (1976, 1976), *Assistant Professor of Business Administration*. B.S., Indiana University.
- LEWIS A. FOSTER, JR. (1977, 1954, 1955), *Professor of Philosophy*. A.B. and M.A., University of Virginia; Ph.D., University of Udaipur.
- HARVEY FRANK (1974, 1974), *Professor of Law*. A.B., New York University; J.D., Harvard Law School; LL.M., New York University.
- HOWARD M. FRASER (1977, 1974), *Associate Professor of Modern Languages*. A.B., Columbia University; M.A., University of New Mexico; A.M., Harvard University; Ph.D., University of New Mexico.
- ALVIN Z. FREEMAN (1969, 1967), *Professor of History*. B.S., Virginia Military Institute; M.A., Brown University; Ph.D., University of Toronto.
- MARGARET W. FREEMAN (1977, 1967), *Associate Professor of Music*. A.B., Brown University, M.A., Smith College; M.A. Middlebury College.
- HERBERT FRIEDMAN (1973, 1963), *Professor of Psychology*. A.B. Brooklyn College; M.A. and Ph.D., University of Connecticut.
- CHRISTIAN FRONSDAL (1973, 1973), *Visiting Professor of Physics*. B.S., University of Bergen; Ph.D., University of California, Los Angeles.

¹1977-78 only.

FACULTY

- ALAN E. FUCHS (1974, 1969), *Associate Professor of Philosophy*. B.S., Massachusetts Institute of Technology; M.A. and Ph.D., Harvard University.
- JOANNE BASSO FUNIGIELLO (1976, 1967), *Associate Professor of Modern Languages*. A.B., Connecticut College for Women; M.A., Middlebury College.
- PHILIP J. FUNIGIELLO (1971, 1966), *Associate Professor of History*. A.B., Hunter College; M.A., University of California, Berkeley; Ph.D., New York University.
- HERBERT O. FUNSTEN (1968, 1963), *Professor of Physics*. A.B., M.A. and Ph.D., University of Virginia.
- WARWICK R. FURR, II (1976, 1975), *Associate Professor of Law*. B.A., The American University; LL.B., University of Virginia.
- ARMAND J. GALFO (1968, 1958), *Professor of Education*. A.B., M.Ed. and Ed.D., University of Buffalo.
- WILLIAM E. GARLAND, JR. (1977, 1972), *Associate Professor of Education*. B.A., University of New Hampshire; M.S., Utah State University; D.A., Carnegie-Mellon University.
- MARTIN A. GARRETT (1968, 1963), *Professor of Economics*. B.S., Middle Tennessee State College; Ph.D., Vanderbilt University.
- JOHN H. GATES (1977, 1977), *Visiting Assistant Professor of Economics*. B.S. and M.A., State University of New York, Buffalo.¹
- CLIFFORD GAUTHIER (1976, 1973), *Instructor in Physical Education for Men*. B.A., University of Denver; M.S., University of Colorado.
- KEVIN E. GEOFFROY (1969, 1965), *Associate Professor of Education*. A.B., Tufts University; M.Ed., Boston University; Ed.D., Arizona State University.
- NORMAN E. GIBBS (1974, 1969), *Associate Professor of Mathematics and Computer Science*. B.S., Ursinus College; M.S. and Ph.D., Purdue University.
- RONALD N. GIESE (1977, 1974), *Associate Professor of Education*. B.S., State University of New York at Buffalo; M.S., Temple University; Ed.D., Temple University.
- HAROLD B. GILL, JR. (1974, 1974), *Lecturer in History*. A.B. and M.A., College of William and Mary.
- H. EDWIN GODSHALL, JR. (1973, 1973), *Lecturer in Music*. B.A., College of William and Mary; M.A., Temple University.
- VICTOR GOLDSMITH (1976, 1972), *Associate Professor of Marine Science*. B.S., City University of New York; M.S. Florida State University; Ph.D., University of Massachusetts.
- BRUCE K. GOODWIN (1971, 1963), *Professor of Geology*. A.B., University of Pennsylvania; M.S. and Ph.D., Lehigh University.
- LAWRENCE C. GOODWYN (1977, 1977), *Visiting James Pinckney Harrison Professor of History*. B.A., Texas Agricultural and Mechanical University; M.A., Trinity University; Ph.D., University of Texas.¹
- HAYDEN H. GORDON (1971, 1971), *Instructor in Marine Science*. B.S. and M.S., College of William and Mary.
- CURTIS C. GRAHAM, JR., Captain (1975, 1975), *Assistant Professor of Military Science*. B.S., Clemson University.
- BRUCE S. GRANT (1972, 1968), *Associate Professor of Biology*. B.S., Bloomsburg State College; M.S. and Ph.D., North Carolina State University at Raleigh.
- GEORGE C. GRANT (1968, 1968), *Assistant Professor of Marine Science*. B.S., University of Massachusetts; M.A., College of William and Mary; Ph.D., University of Rhode Island.
- GEORGE W. GRAYSON, (1977, 1968), *Professor of Government*. A.B., University of North Carolina; M.A. and Ph.D., Johns Hopkins University; J.D., College of William and Mary.
- JAMES E. GRIFFIN (1975, 1975), *Assistant Professor of Modern Languages*. B.A., University of Florida; M.A. and Ph.D., University of North Carolina.
- FRANZ L. GROSS (1976, 1970), *Professor of Physics*. A.B., Swarthmore College; Ph.D., Princeton University.

¹1977-78 only.

FACULTY

- ANTHONY L. GUENTHER (1972, 1967), *Associate Professor of Sociology*. A.B., Vanderbilt University; M.A., Northwestern University; Ph.D., Purdue University.
- MARK G. GULESIAN (1974, 1970), *Associate Professor of Education*. A.B., Tufts University; M.Ed. and Ed.D., University of Massachusetts.
- MAX D. GUNZBURGER (1973, 1973), *Adjunct Assistant Professor of Mathematics and Computer Science*. B.S., M.S., and Ph.D., New York University.
- PAUL A. HAEFNER, JR. (1969, 1969), *Associate Professor of Marine Science*. B.S., Franklin and Marshall College; M.S. and Ph.D., University of Delaware.
- DAVID HALL, (1976, 1976), *Lecturer in Music*. A.B., Virginia Commonwealth University; M.M., New England Conservatory of Music.
- GUSTAV W. HALL (1968, 1963), *Associate Professor of Biology*. A.B., and M.S., Ohio University; Ph.D., Indiana University.
- RONALD A. HALLETT (1976, 1970), *Associate Professor of Modern Languages*. A.B., M.A., and Ph.D., Pennsylvania State University.
- JAMES R. HALTINER (1976, 1976), *Assistant Professor of Business Administration*. B.A., M.B.A., D.B.A., University of Virginia.
- HIROYUKI HAMADA (1974, 1974), *Lecturer in Physical Education*. A.B., Greensboro College; M.A. College of William and Mary.
- MARGARET L. HAMILTON (1969, 1953), *Professor of Government*. A.B., University of Michigan; M.A. and Ph.D., Columbia University.
- WILLIAM R. HAMILTON (1975, 1975), *Assistant Professor of Music*. University of California, Berkeley; M.A., California State University, San Francisco.
- BEN AINSWORTH HAMMACK (1974, 1974), *Lecturer in Psychology*. B.A. and Ph.D., University of Texas.
- ROBERT J. HANNY (1969, 1969), *Associate Professor of Education*. B.S., M.A., and Ph.D., Ohio State University.
- EUGENE RAE HARCUM (1965, 1958), *Professor of Psychology*. B.S., College of William and Mary; M.A., The Johns Hopkins University; Ph.D., University of Michigan.
- WILLIAM J. HARGIS, JR. (1959, 1955), *Professor of Marine Science*. A.B. and M.A., University of Richmond; Ph.D., Florida State University.
- FREDERICK H. de B. HARRIS (1975, 1975), *Assistant Professor of Economics*. B.A., Dartmouth College.
- JAMES F. HARRIS (1974, 1974), *Associate Professor of Philosophy*. A.B. and M.A., University of Georgia; Ph.D., Vanderbilt University.
- TRUDIER HARRIS (1973, 1973), *Assistant Professor of English*. A.B., Stillman College. M.A. and Ph.D., Ohio State University.¹
- DEBORAH G. HARTLEY (1974, 1974), *Assistant Professor of Psychology*. A.B., Washington College. M.A. and Ph.D., University of Virginia.
- DAVID J. HARTZBAND (1976, 1976), *Instructor in Marine Science*. B.S., Syracuse University; M.S., Ohio University.
- CLYDE A. HAULMAN (1972, 1969), *Associate Professor of Economics*. A.B., M.S., and Ph.D., Florida State University.¹
- DEXTER S. HAVEN (1959, 1949), *Associate Professor of Marine Science*. B.S. and M.S., Rhode Island State College.
- WILLIAM H. HAWTHORNE (1976, 1976), *Assistant Professor of Business Administration*. B.S., Virginia Polytechnic Institute; M.S. and Ph.D., University of Tennessee.
- STEVEN M. HAYNIE (1974, 1970), *Assistant Professor of Physical Education for Men*. B.S., Northwestern State College; M.S., University of Tennessee.

¹On leave, 1977-78.

FACULTY

- THOMAS L. HEACOX (1973, 1970), *Assistant Professor of English*. A.B., Pennsylvania State University; M.A. and Ph.D., The Johns Hopkins University.
- PAUL HELFRICH (1977, 1971), *Associate Professor of Fine Arts*. B.F.A. and M.F.A., Ohio University.
- ERIC HERBST (1974, 1974), *Assistant Professor of Chemistry*. A.B., University of Rochester; M.A. and Ph.D., Harvard University.
- CAROLINE C. HERIOT (1976, 1976), *Librarian and Professor of Law*. A.B., Lander College; B.S. and J.D., University of North Carolina at Chapel Hill.
- DONALD J. HERRMANN (1963, 1951), *Professor of Education*. B.Ed., Northern Illinois University; M.A. and Ph.D., Michigan State University.
- DEBRA HILL (1976, 1976), *Instructor in Physical Education*. B.S., The University of Houston; M.S., The University of North Carolina at Greensboro.
- KATHERINE C. HILL (1977, 1977), *Instructor in English*. B.A., Fordham University; M.A., Columbia University.
- TREVOR B. HILL (1970, 1963), *Professor of Chemistry*. B.S., University of Alberta, Canada; Ph.D., Cornell University.
- WALTER J. HOAGMAN (1971, 1971), *Assistant Professor of Marine Science*. B.S., Eastern Michigan University; M.S., University of Michigan; Ph.D., University of Wisconsin.
- DALE E. HOAK (1975, 1975), *Associate Professor of History*. B.A., College of Wooster; M.A., University of Pittsburgh; Ph.D., University of Cambridge.
- CARL H. HOBBS, III (1975, 1975), *Instructor in Marine Science*. B.S., Union College; M.S., University of Massachusetts.
- STANTON F. HOEGERMAN (1976, 1976), *Assistant Professor of Biology*. B.S., Cornell University; M.S. and Ph.D., North Carolina State University.
- WALTER E. HOFFMAN (1977, 1977), *Visiting Tazewell Taylor Professor of Law*. B.S., University of Pennsylvania; LL.B., Washington and Lee University.¹
- DAVID L. HOLMES, JR. (1973, 1965), *Associate Professor of Religion*. A.B., Michigan State University; M.A., Columbia University; M.A., and Ph.D., Princeton University.
- H. LESTER HOOKER, JR. (1970, 1963), *Associate Professor of Physical Education for Men*. A.B., M.Ed., College of William and Mary.
- WRIGHT B. HOUGHLAND (1967, 1967), *Lecturer in Fine Arts*. B. Arch., University of Virginia.
- JOE BEN HOYLE (1976, 1976), *Assistant Professor of Business Administration*. B.A., Duke University; M.A., Appalachian State University.
- STANLEY HUMMEL (1966, 1964), *Research Engineer in Physics*.
- PAUL V. HYER (1969, 1968), *Assistant Professor of Marine Science*. B.S., University of Notre Dame; Ph.D., University of Maryland.
- SATOSHI ITO (1971, 1965), *Associate Professor of Sociology*. A.B., California State College at Long Beach; M.A. and Ph.D., University of North Carolina, Chapel Hill.
- MARLENE K. JACK (1977, 1974), *Assistant Professor of Fine Arts*. A.B., Knox College; M.F.A., University of Minnesota.
- CHRISTINA WHYTECK JACKSON (1976, 1969), *Assistant Professor of Physical Education for Women*. B.S. and M.Ed., Springfield College.
- DAVID CLAY JENKINS (1968, 1956), *Professor of English*. A.B. and M.A., University of Alabama; Ph.D., University of Iowa.
- DUDLEY M. JENSEN (1962, 1951), *Associate Professor of Physical Education for Men*. B.S., Springfield College; M.A., Teachers College, Columbia University.
- GERALD H. JOHNSON (1977, 1965), *Professor of Geology*. B.S., M.A. and Ph.D., Indiana University.
- J. RODNEY JOHNSON (1977, 1977), *Visiting Professor of Law*. B.A. and J.D., College of William and Mary; LL.M., New York University; C.L.U., American College.¹

¹1977-78 only.

FACULTY

- LUDWELL H. JOHNSON, III (1965, 1955), *Professor of History*. A.B. and Ph.D., The Johns Hopkins University.
- ROBERT A. JOHNSTON (1966, 1963), *Professor of Psychology*. A.B., Haverford College; M.A. and Ph.D., State University of Iowa.
- RAJ K. JOLLY (1971, 1971), *Lecturer in Physics*. M.S., Panjab University; Ph.D., University of Pittsburgh.
- DAVID H. JONES (1972, 1967), *Professor of Philosophy*. A.B., University of Missouri; M.A. and Ph.D., Harvard University.
- EDWARD E. JONES (1971, 1963), *Associate Professor of Physical Education for Men*. B.S. and M.Ed., College of William and Mary.
- J. WARD JONES, JR. (1967, 1961), *Chancellor Professor of Classical Studies*. A.B., University of Richmond; M.A. and Ph.D., University of North Carolina.
- ROBERT A. JORDAN (1971, 1971), *Assistant Professor of Marine Science*. B.S., M.S., and Ph.D., University of Michigan.
- ALEXANDER KALLOS (1964, 1949), *Professor of Modern Languages*. M.A. and Ph.D., University of Pennsylvania.
- JOHN ROBERT KANE (1971, 1964), *Associate Professor of Physics*. B.S., Loyola College; M.S. and Ph.D., Carnegie Institute of Technology.
- DELMAR KARLEN (1977, 1977), *Visiting Tazewell Taylor Professor of Law*. B.A., University of Wisconsin; L.L.B., Columbia University.¹
- HOWARD IRA KATOR (1975, 1975), *Assistant Professor of Marine Science*. B.A., Harpur College; Ph.D., Florida State University.
- EDWARD KATZ (1963, 1947), *Instructor in Chemistry*. B.S., College of William and Mary.
- E. MORGAN KELLEY, JR. (1968, 1968), *Assistant Professor of Modern Languages*. A.B., Washington and Lee University; M.A. and Ph.D., Michigan State University.
- JON S. KERNER (1974, 1969), *Associate Professor of Sociology*. B.S., Carroll College; M.A. and Ph.D., Indiana University.
- R. WAYNE KERNODLE (1953, 1945), *Professor of Sociology*. A.B., M.A. and Ph.D., University of North Carolina.
- VIRGINIA KERNS (1977, 1977), *Visiting Assistant Professor of Anthropology*, B.A., College of William and Mary; M.A. Case Western Reserve University.¹
- BURTON KESTER (1975, 1975), *Lecturer in Music*. B.F.A. and M.F.A., Carnegie-Mellon Institute.
- DELPHA B. KEYS (1976, 1976), *Assistant Professor of Education*. B.A. and Ed.D., Columbia University.
- RICHARD L. KIEFER (1968, 1965), *Associate Professor of Chemistry*. A.B., Drew University, Ph.D., University of California, Berkeley.
- CHONGHAN KIM (1970, 1964), *Professor of Government*, A.B., M.A. and Ph.D., Indiana University.²
- PETER KLAPPERT (1976, 1976), *Assistant Professor of English*, B.A., Cornell University; M.A. and M.F.A., University of Iowa.¹
- YONA Z. KNORR (1971, 1971), *Lecturer in Music*. Diploma in Piano Performance and Piano Pedagogy, Rubin Academy of Music, Jerusalem, Israel; M.M., University of Texas.³
- JAMES D. KORNWOLF (1971, 1968), *Associate Professor of Fine Arts*. B.F.A., University of Illinois; M.A., University of Wisconsin; Ph.D., Courtauld Institute of Art, University of London.
- WILLIAM J. KOSSLER (1970, 1969), *Associate Professor of Physics*. B.S., Massachusetts Institute of Technology; Ph.D., Princeton University.
- JOHN N. KRAEUTER (1974, 1974), *Assistant Professor of Marine Science*. B.S., Florida State University; M.A., College of William and Mary; Ph.D., University of Delaware.

¹1977-78 only.

²On leave, second semester.

³On leave, 1977-78.

FACULTY

- DAVID E. KRANBUEHL (1974, 1970), *Associate Professor of Chemistry*. A.B., DePauw University; Ph.D., University of Wisconsin.
- GARY A. KREPS (1977, 1972), *Associate Professor of Sociology*. A.B., University of Akron; M.A. and Ph.D., Ohio State University.
- ALLAN L. KULIKOFF (1975, 1975), *Assistant Professor of History*. B.A., George Washington University; M.A. and Ph.D., Brandeis University.
- ALBERT Y. KUO (1973, 1972), *Associate Professor of Marine Science*. B.S., Taiwan University; M.S., University of Iowa, Ph.D., The Johns Hopkins University.
- ANN T. LAMBERT (1976, 1969), *Associate Professor of Physical Education for Women*. B.S., Appalachian State University; M.S.P.E., University of North Carolina, Greensboro.
- JAMES A. LANIER (1972, 1972), *Instructor in Marine Science*. B.A., University of Virginia; M.A., College of William and Mary.
- DONALD R. LASHINGER (1974, 1974), *Associate Professor of Education*. B.A., Gannon College; M.Ed., Edinboro State University; Ed.D., Syracuse University.
- JOHN F. LAVACH (1976, 1967), *Professor of Education*. A.B., Montclair State College; M.A., Fairleigh Dickinson University; Ed.D., Duke University.
- JAMES D. LAVIN (1970, 1968), *Associate Professor of Modern Languages*. A.B. and Ph.D., Florida State University.
- SIDNEY H. LAWRENCE (1965, 1961), *Associate Professor of Mathematics and Computer Science*. A.B., M.A. and Ph.D., University of Virginia.
- LEWIS W. LEADBEATER (1974, 1965), *Professor of Classical Studies*. A.B., University of Pittsburgh; M.A. and Ph.D., New York University.
- FRANK T. LENDRIM (1974, 1974), *Associate Professor of Music*. B.Mus., Oberlin College; M.M. and Ph.D., University of Michigan.
- VERA ZATHURECZKY LENDVAY (1969, 1969), *Lecturer in Music*. Diploma, Professor of Music and Performing Artist, Franz Liszt Academy of Music.
- MICHAEL H. LESSNOFF (1977, 1977), *Visiting Associate Professor of Government*. M.A., University of Glasgow; B.Phil., Balliol College, Oxford University.¹
- JOHN LEVY (1976, 1976), *Director of Clinical Education and Visiting Associate Professor of Law*. B.A., New York University; J.D., Syracuse University School of Law.
- JAMES K. LEWIS (1976, 1976), *Instructor in Marine Science*. B.S., Oklahoma State University; M.A., College of William and Mary.
- WILLIAM W. LIDDELL (1974, 1971), *Associate Professor of Business Administration*. B.B.A., Western Michigan University; M.B.A., Wayne State University; Ph.D., Pennsylvania State University.
- VICTOR A. LIGUORI (1970, 1964), *Associate Professor of Sociology*. A.B., Haverford College; M.A. and Ph.D., Princeton University.
- JOHN LINDBERG (1976, 1976), *Lecturer in Music*.
- MONT LINKENAUER (1969, 1960), *Associate Professor of Physical Education for Men*. B.S. and M.Ed., College of William and Mary; R.P.T., Medical College of Virginia.
- MARK G. LITTLEFIELD (1974, 1974), *Assistant Professor of Modern Languages*. A.B., Yale University; M.A., and Ph.D., University of California, Berkeley.²
- JAMES C. LIVINGSTON (1968, 1968), *Professor of Religion*. A.B., Kenyon College; B.D., Union Theological Seminary, New York; Ph.D., Columbia University.
- JOSEPH LOESCH (1969, 1969), *Assistant Professor of Marine Science*. B.S., University of Rhode Island; M.S. and Ph.D., University of Connecticut.
- WILLIAM FRANK LOSITO (1972, 1972), *Assistant Professor of Education*. B.A., University of Dayton; Ph.D., Indiana University.

¹1977-78 only.

²On leave, 1977-78.

FACULTY

- MAURICE P. LYNCH (1976, 1972), *Associate Professor of Marine Science*. A.B., Harvard University; M.A. and Ph.D., College of William and Mary.
- ROBERT P. MACCUBBIN (1973, 1964), *Associate Professor of English*. A.B., The Johns Hopkins University; M.A. and Ph.D., University of Illinois.
- WILLIAM G. MACINTYRE (1965, 1965), *Assistant Professor of Marine Science*. B.S., M.S. and Ph.D., Dalhousie University.
- WILLIAM J. MADDOCKS (1975, 1971), *Associate Professor of Business Administration*. B.S., U.S. Naval Academy; M.S., Purdue University. M.B.A. and D.B.A., George Washington University.
- MICHAEL T. MADISON (1976, 1972), *Professor of Law*. A.B., George Washington University; J.D., Harvard University; LL.M., New York University.
- ROBERT MAIDMENT (1970, 1970), *Associate Professor of Education*. B.S., M.Ed., and Ed.D., University of Virginia.
- HENRY E. MALLUE, JR. (1975, 1975), *Assistant Professor of Business Administration*. B.S.B.A. and J.D., University of Florida; M.B.A., Florida Technological University; Ed.D., Oklahoma State University.
- CHARLOTTE P. MANGUM (1974, 1964), *Professor of Biology*. A.B., Vassar College; M.S. and Ph.D., Yale University.
- DENYSE C. MARCHESSEAU (1974, 1974), *Assistant Professor of Modern Languages*. B.Phil., Académie de Paris; License ès lettres. Sorbonne.
- J. LUKE MARTEL (1975, 1963), *Professor of Modern Languages*. A.B., University of Arizona; Licence ès Lettres, Université de Montpellier; Doctorat Université d'Aix-Marseille.
- MARTIN C. MATHES (1974, 1967), *Professor of Biology*. A.B., Miami University; M.S. and Ph.D., University of Maryland.
- CHARLES O. MATTHEWS, II (1973, 1973), *Assistant Professor of Education*. A.B., Davidson College; M.A.T., Harvard University; Ph.D., Duke University.
- JOHN R. MATTHEWS, JR. (1975, 1961), *Professor of Economics*. B.S. and M.A., University of Virginia.
- GILBERT H. MCARTHUR (1971, 1966), *Associate Professor of History*. A.B., Friends University; Ph.D., University of Rochester.
- MORRIS A. MCCAIN, JR. (1977, 1977), *Assistant Professor of Government*. B.A., Carleton College; M.A., Oxford University; M.Phil., Yale University.
- BRUCE A. MCCONACHIE (1976, 1976), *Assistant Professor of Theatre and Speech*. A.B., Grinnell College; M.F.A., University of Minnesota.
- JAMES N. MCCORD, JR. (1969, 1965), *Associate Professor of History*. A.B., Emory University; M.A. and Ph.D., The Johns Hopkins University.
- DREW RANDALL MCCOY (1976, 1976), *Assistant Professor of History and Fellow, Institute of Early American History and Culture*. A.B., Cornell University; M.A., and Ph.D. University of Virginia.
- CECIL M. MCCULLEY (1963, 1948), *Professor of English*. A.B. and M.A., Southern Methodist University; Ph.D., Columbia University.
- MICHAEL MCGIFFERT (1972, 1972), *Professor of History*. A.B., Harvard College; B.D., Yale Divinity School; Ph.D., Yale University.
- JOHN JOSEPH MCGLENNON (1974, 1974), *Assistant Professor of Government*. B.A., Fordham University; M.A., and Ph.D., The Johns Hopkins University.
- SUSAN M. MCHUGH (1976, 1976), *Instructor in Theatre and Speech*. B.S., Clarion State College; M.S., Southern Illinois University.
- VIRGIL V. MCKENNA (1973, 1962), *Professor of Psychology*. A.B., College of William and Mary; M.A., Swarthmore College; Ph.D., Princeton University.
- JOHN L. MCKNIGHT (1968, 1957), *Professor of Physics*. A.B., University of Michigan; M.S. and Ph.D., Yale University.
- HENRY E. MCLANE (1967, 1965), *Associate Professor of Philosophy*. A.B., George Washington University; M.A. and Ph.D., Yale University.

FACULTY

- JOHN V. MERRINER (1974, 1970), *Assistant Professor of Marine Science*. A.B., Rutgers University; M.S. and Ph.D., North Carolina State University.
- LOUIS P. MESSIER (1972, 1972), *Associate Professor of Education*. B.S. Johnson State College; M.Ed. and Ed.D., Boston University.
- DONALD J. MESSMER (1976, 1973), *Associate Professor of Business Administration*. B.S.B.A. and Ph.D., Washington University.
- MICHAEL MEYER (1977, 1977), *Visiting Assistant Professor of English*. B.A. William Paterson College; M.A. and Ph.D., University of Connecticut.¹
- TERRY L. MEYERS (1973, 1970), *Assistant Professor of English*. A.B., Lawrence University; M.A. and Ph.D., University of Chicago.
- PATRICK H. MICKEN (1976, 1966), *Associate Professor of Theatre and Speech*, B.S. and M.S., Southern Illinois University.
- ROBERT W. MILLER (1972, 1972), *Assistant Professor of Mathematics and Computer Science*. A.B., Park College; M.A. and Ph.D., University of Wisconsin.
- LAWRENCE L. MILLS, Lieutenant Colonel (1975, 1975), *Professor of Military Science*. B.S., Oklahoma State University; M.B.A., Ohio State University.
- DON A. MONSON (1976, 1976), *Assistant Professor of Modern Languages*. B.A., University of Utah; M.A. and Ph.D., University of Chicago.
- DAVID C. MONTGOMERY (1977, 1977), *Professor of Physics*. B.S., University of Wisconsin; M.A. and Ph.D., Princeton University.
- CARLISLE E. MOODY (1975, 1970), *Associate Professor of Economics*. A.B., Colby College; M.A. and Ph.D., University of Connecticut.
- JOHN A. MOORE (1965, 1950), *Professor of Modern Languages*. B.S., Davidson College; M.A. and Ph.D., University of North Carolina.
- WILLIAM L. MORROW (1971, 1971), *Professor of Government*. A.B., Southwest Missouri State College; M.A. and Ph.D., University of Iowa.
- RUTH K. MULLIKEN (1975, 1975), *Professor of Education*. B.S. and M.A., New York University; Ph.D., University of Utah.
- JOHN C. MUNDAY (1975, 1970), *Associate Professor of Marine Science*. A.B., Cornell University; Ph.D., University of Illinois.
- JOHN A. MUSICK (1970, 1968), *Assistant Professor of Marine Science*. A.B., Rutgers. The State University; M.A. and Ph.D., Harvard University.
- BRUCE J. NEILSON (1975, 1972), *Associate Professor of Marine Science*. B.A., M.S.E. and M.A., Princeton University; Ph.D., Johns Hopkins University.
- FRANCES H. NELSON (1971, 1968), *Assistant Professor of Education*. A.B., Winthrop College; M.Ed., College of William and Mary.
- ANN TYLER NETICK (1974, 1962), *Associate Professor of Modern Languages*. A.B., Randolph-Macon Woman's College; M.A., Columbia University, Ph.D., Vanderbilt University.
- ELSA NETTELS (1975, 1967), *Professor of English*. A.B., Cornell University; M.A. and Ph.D., University of Wisconsin.
- RICHARD K. NEWMAN, JR. (1966, 1946), *Professor of Fine Arts*. A.B., Dartmouth College; Ph.D., Yale University.
- MAYNARD M. NICHOLS (1961, 1961), *Associate Professor of Marine Science*. B.S., Columbia University; M.S., Scripps Institute of Oceanography; Ph.D., University of California, Los Angeles.
- LOUIS J. NOISIN (1972, 1972), *Assistant Professor of Anthropology*. B.Litt. and LL.B., University of Haiti.
- ROBERT E. NOONAN (1976, 1976), *Associate Professor of Mathematics and Computer Science*. A.B., Providence College; M.S. and Ph.D., Purdue University.

¹1977-78 only.

FACULTY

- CYNTHIA H. NULL (1973, 1973), *Assistant Professor of Psychology*. A.B., Albion College; M.A. and Ph.D., Michigan State University.
- WILLIAM E. O'CONNELL, JR. (1971, 1969), *Associate Professor of Business Administration*. A.B., Manhattan College; M.B.A., Columbia University; D.B.A., Indiana University; J.D., College of William & Mary.
- PATRICIA ONDERCIN (1976, 1975), *Clinical Psychologist and Lecturer in Psychology*. B.A., Marquette University; M.A. and Ph.D., University of Florida.
- PETER V. O'NEIL (1975, 1967), *Professor of Mathematics and Computer Science*. B.S., Fordham University; M.S. and Ph.D., Rensselaer Polytechnic Institute.
- JAMES M. ORTEGA (1973, 1973), *Adjunct Professor of Mathematics and Physics*. B.S., University of New Mexico; Ph.D., Stanford University.
- ROBERT J. ORTH (1975, 1975), *Assistant Professor of Marine Science*. B.A., Rutgers University; M.S., University of Virginia; Ph.D., University of Maryland.
- ROBERT A. ORWOLL (1972, 1969), *Associate Professor of Chemistry*. A.B., St. Olaf College; Ph.D., Stanford University.
- CURTIS H. O'SHELL (1968, 1968), *Associate Professor of Education*. B.A., Pennsylvania State University; M.A., Allegheny College; Ed.D., Pennsylvania State University.
- FRANKLYN D. OTT (1970, 1970), *Assistant Professor of Marine Science*. B.S., Lynchburg College; Ph.D., University of Kansas.
- PIERRE C. OUSTINOFF (1958, 1953), *Professor of Modern Languages*. A.B., M.A. and Ph.D., Columbia University.
- SANDRA VERNON OWEN (1972, 1972), *Lecturer in Music*. B.MusEd., Madison College; M.Mus.Ed., Indiana University.
- MARIA ROBREDO PALMAZ (1977, 1964), *Associate Professor of Modern Languages*. A.B., National Institute of Modern Languages, Buenos Aires; M.A., University of Cordoba; Diplôme De Culture Française Contemporaine, University of Paris.
- COLIN PARK (1973, 1973), *Professor of Business Administration*. M.B.A., University of Buffalo; Ph.D., University of Chicago.
- JAE H. PARK (1974, 1974), *Research Assistant Professor of Physics*. B.S., Seoul National University, Korea; M.S., Wilkes College; Ph.D., University of Colorado.
- WILLIAM B. PARKHILL (1972, 1972), *Instructor in Physical Education for Men*. B.S., Lock Haven State College.
- WILHELM PAUCK (1977, 1977), *Walter G. Mason Visiting Professor of Religion*. Licentiate in Theology, University of Berlin; Ph.D., University of Giessen.¹
- ROY L. PEARSON (1976, 1971), *Professor of Business Administration*. B.S. and Ph.D., University of Virginia.
- CHARLES F. PERDRISAT (1976, 1966), *Professor of Physics*. B.S., University of Geneva; D.Sc., Federal Institute of Technology, Zurich.
- FRANK O. PERKINS (1973, 1966), *Associate Professor of Marine Science*. A.B., University of Virginia; M.S. and Ph.D., Florida State University.
- JOHN MORRILL PETERSON (1976, 1976), *Lecturer in Law*. B.A., J.D., and M.L. & T., College of William and Mary.
- KENNETH G. PETZINGER (1977, 1972), *Associate Professor of Physics*. A.B., Princeton University; M.A., Columbia University; Ph.D., University of Pennsylvania.
- JOHN B. PLEASANTS (1974, 1974), *Instructor in Marine Science*, B.S., U. S. Naval Academy; M.M.A., University of Rhode Island.
- WILLIAM G. POOLE, JR. (1976, 1970), *Associate Professor of Mathematics and Computer Science*. A.B. and M.A., University of Texas; Ph.D., University of California, Berkeley.
- NANCY LEE PORTER (1976, 1975), *Assistant Professor of Physical Education for Women*. B.S., Ursinus College; M.A., Villanova University.

¹First semester only.

FACULTY

- DAVID H. PORUSH (1977, 1977), *Assistant Professor of English*. B.S., Massachusetts Institute of Technology; M.A., State University of New York, Buffalo.¹
- BOLLING RAINES POWELL, JR. (1969, 1969), *Professor of Law*. Birmingham-Southern College; M.A. and LL.B., University of Virginia.
- DONALD I. PRATT, JR., Captain (1977, 1977), *Assistant Professor of Military Science*, B.S. United States Military Academy.
- F. DOUGLAS PRILLAMAN (1969, 1969), *Associate Professor of Education*. B.S., Lincoln Memorial University; M.Ed., College of William and Mary.
- RICHARD H. PROSL (1969, 1966), *Associate Professor of Mathematics and Computer Science*. B.S., College of William and Mary; A.B. and M.A., University College, Oxford; M.S. and Ph.D., Rensselaer Polytechnic Institute.
- JOHN S. QUINN (1959, 1949, 1956), *Professor of Business Administration*. B.S., State Teachers College, Salem, Massachusetts; M.C.S., Boston University; M.B.A., Harvard University; C.P.A.
- CHARLES L. QUITMEYER (1962, 1948, 1962), *Professor of Business Administration*. A.B., College of William and Mary; M.B.A., Harvard University; Ph.D., Columbia University.
- LARRY RABINOWITZ (1968, 1968), *Assistant Professor of Mathematics and Computer Science*. A.B., M.S., and Ph.D., Rutgers University.
- RONALD B. RAPOPORT (1975, 1975), *Assistant Professor of Government*. B.A., Oberlin College. M.A., University of Michigan.
- PAUL C. REARDON (1978, 1978), *Visiting Professor of Law*. A.B. and LL.B., Harvard University.²
- ANN M. REED (1977, 1976), *Assistant Professor of English*. B.A., Swarthmore College; M.Ed., University of Pennsylvania; Ph.D., Brandeis University.
- ELIZABETH S. REED (1968, 1955), *Associate Professor of Philosophy*. A.B., Butler University; M.A., Florida State University; Ph.D., Duke University.
- LINDA COLLINS REILLY (1974, 1969), *Associate Professor of Classical Studies*. A.B., Vassar College; M.A. and Ph.D., Johns Hopkins University.
- THEODORE R. REINHART (1974, 1968), *Associate Professor of Anthropology*. A.B., Pennsylvania State University; M.A., George Washington University; Ph.D., University of New Mexico.
- EDWARD A. REMLER (1977, 1967), *Professor of Physics*. B.S., Massachusetts Institute of Technology; M.S., Columbia University; Ph.D., University of North Carolina, Chapel Hill.
- DOUG RENDLEMAN (1976, 1973), *Professor of Law*. A.B., M.A., J.D., University of Iowa; LL.M., University of Michigan.
- THOMAS L. REYNOLDS (1960, 1960), *Professor of Mathematics and Computer Science*. B.S., Guilford College; M.A. and Ph.D., University of North Carolina.
- EDWIN H. RHYNE (1966, 1954), *Professor of Sociology*. B.S., Clemson University; M.A. and Ph.D., University of North Carolina.
- ROGER R. RIES (1972, 1968), *Associate Professor of Education*. B.S., M.Ed. and Ph.D., University of Missouri.
- BRUCE D. RIGELMAN (1973, 1973), *Assistant Professor of Government*. A.B., University of Minnesota; M.A., and Ph.D., Princeton University.
- MORRIS H. ROBERTS, JR. (1973, 1973), *Assistant Professor of Marine Science*. B.A., Kenyon College; M.A. and Ph.D., College of William and Mary.
- SHIRLEY G. ROBY (1970, 1964), *Associate Professor of Dance*. B.S., Longwood College; M.F.A., University of North Carolina, Greensboro.
- CARL A. ROSEBERG (1966, 1947), *Professor of Fine Arts*. B.F.A. and M.F.A., State University of Iowa; Life Fellow, International Institute of Arts and Letters.
- ELLEN F. ROSEN (1971, 1967), *Associate Professor of Psychology*. A.B., Carleton College; M.A. and Ph.D., University of Illinois.

¹1977-78 only.

²Second semester only.

FACULTY

- ARLENE S. ROSENBAUM (1974, 1974), *Instructor in Marine Science*. B.S. and M.P.H., University of Michigan.
- MEYER ROTHWACKS (1977, 1977), *Thomas C. Atkeson Lecturer in Law*, B.A. and J.D., Cornell University.
- CHARLES W. ROYSTER (1977, 1977), *Assistant Professor of History*. A.B., M.A., C.Phil., University of California, Berkeley.
- GEORGET. RUBLEIN (1966, 1966), *Associate Professor of Mathematics and Computer Science*. B.S., St. Mary's University; M.S. and Ph.D., University of Illinois.
- A. MINICK RUSHTON (1974, 1974), *Research Associate in Physics*. B.S., Georgia Institute of Technology; M.A. and Ph.D., Columbia University.
- EVON P. RUZECKI (1965, 1965), *Assistant Professor of Marine Science*. A.B., Knox College; M.S., University of Wisconsin.
- MADELAINE A. RYLAND (1977, 1977), *Acting Assistant Professor of Modern Languages*. B.A. College of William and Mary; M.A., University of New Mexico.¹
- RONALD R. SAINT-ONGE (1976, 1970), *Associate Professor of Modern Languages*. A.B., Providence College; M.A. and Ph.D., Vanderbilt University.
- ANTHONY L. SANCETTA (1961, 1948), *Professor of Business Administration*. A.B., Western Reserve University; M.S. and Ph.D., Columbia University.
- ALLEN R. SANDERSON (1973, 1973), *Assistant Professor of Economics*. A.B., Brigham Young University; M.A., University of Chicago.
- JAGDISH C. SANWAL (1966, 1966), *Associate Professor of Mathematics and Computer Science*. B.S. and M.S., Lucknow University, India; Ph.D., Indiana University.
- ASHOK P. SATHE (1973, 1973), *Research Associate in Physics*. B.Tech., Indian Institute of Technology; M.A., Columbia University.
- JAMES B. SAVAGE (1976, 1970), *Associate Professor of English*. A.B., Princeton University; M.A., Northwestern University; Ph.D., Princeton University.²
- ELMER J. SCHAEFER (1975, 1973), *Associate Professor of Law*. A.B., Northwestern University, M.A., J.D., Harvard University.
- MARGARET SCHAEFER (1977, 1977), *Assistant Professor of Mathematics and Computer Science*. B.A., Smith College; M.A., Harvard University; Ph.D., Northwestern University.¹
- CATHARINE M. SCHEIBNER (1976, 1975), *Assistant Professor of Physical Education for Women*. B.A., Mount Holyoke College; M.S., Smith College.
- MELVYN D. SCHIAVELLI (1971, 1968), *Associate Professor of Chemistry*. B.S., DePaul University; Ph.D., University of California, Berkeley.
- LEONARD G. SCHIFRIN (1970, 1965), *Professor of Economics*. A.B. and M.A., University of Texas; Ph.D., University of Michigan.
- KURT T. SCHMIDT (1972, 1972), *Lecturer in Psychology*. M.D., University of Munich Medical School.
- ROBERT J. SCHOLNICK (1973, 1967), *Associate Professor of English*. A.B., University of Pennsylvania; M.A. and Ph.D., Brandeis University.
- HARLAN E. SCHONE (1974, 1965), *Professor of Physics*. B.S., University of Illinois; Ph.D., University of California, Berkeley.
- JOSEPH LEE SCOTT (1976, 1970), *Associate Professor of Biology*. A.B. and M.A. University of California, Santa Barbara; Ph.D., University of California, Irvine.
- JOHN E. SELBY (1970, 1963), *Professor of History*. A.B., Harvard College; M.A. and Ph.D., Brown University.
- KEITH D. SERAFY (1976, 1976), *Assistant Professor of Marine Science*. B.A., University of South Florida; M.S. and Ph.D., University of Maine.

¹1977-78 only.

²On leave, 1977-78.

FACULTY

- KELLY G. SHAVER (1973, 1968), *Associate Professor of Psychology*. B.S. and M.S., University of Washington; Ph.D., Duke University.
- GLENN D. SHEAN (1970, 1966), *Associate Professor of Psychology*. A.B., Louisiana State University, New Orleans; M.A. and Ph.D., University of Arizona.
- THOMAS F. SHEPPARD (1977, 1969), *Professor of History*. A.B., Vanderbilt University; M.A., University of Nebraska; Ph.D., The Johns Hopkins University.
- ARDEN SHER (1972, 1967), *Professor of Physics*. B.S. and Ph.D., Washington University, St. Louis.
- CAROL W. SHERMAN (1970, 1963), *Associate Professor of Dance*. A.B., Hollins College; M.A., Sarah Lawrence College.
- RICHARD B. SHERMAN (1970, 1960), *Professor of History*. A.B., Harvard University; M.A., University of Pennsylvania; Ph.D., Harvard University.
- SYLVIA SHIRLEY (1976, 1975), *Assistant Professor of Physical Education for Women*. B.A., Birmingham University, England; M.A., State University of New York at Cortland.
- DORA SHORT (1975, 1975), *Lecturer in Music*.
- ROBERT T. SIEGEL (1963, 1963), *Professor of Physics*. B.S., M.S. and D.Sc., Carnegie Institute of Technology.
- GENE M. SILBERHORN (1972, 1972), *Assistant Professor of Marine Science*. B.S., Eastern Michigan University; M.S., West Virginia University; Ph.D., Kent State University.
- FRANTISEK SMETANA (1974, 1974), *Lecturer in Music*. Graduate State Conservatory in Prague; M.M., Ecole Normale de Music in Paris.
- CRAIG L. SMITH (1970, 1970), *Assistant Professor of Marine Science*. A.B., The Johns Hopkins University; Ph.D., University of Florida.
- GARY A. SMITH (1976, 1969), *Associate Professor of Modern Languages*. A.B., University of Kansas; Ph.D., University of Texas at Austin.
- HOWARD M. SMITH, JR. (1965-1946), *Professor of Physical Education for Men*. B.S., College of William and Mary; M.S., Syracuse University.
- JAMES A. SMITH, Major (1971, 1971), *Assistant Professor of Military Science*. B.S., Clemson University.
- JAMES E. SMITH (1976, 1970), *Professor of Business Administration*. A.B., Southeastern Louisiana College; M.B.A., University of Houston; Ph.D., University of Arizona; C.P.A.
- JERRY C. SMITH (1975, 1969), *Associate Professor of Modern Languages*. A.B., University of Texas; M.A. and Ph.D., Cornell University.
- LEROY W. SMITH (1967, 1956), *Professor of English*. A.B., American University; M.A., George Washington University; Ph.D., Duke University.
- ROGER W. SMITH (1972, 1967), *Associate Professor of Government*. A.B., Harvard College; M.A. and Ph.D., University of California, Berkeley.¹
- JON F. SOEST (1974, 1967), *Associate Professor of Physics*. A.B., Pomona College; M.S. and Ph.D., University of Washington.¹
- ROBERT J. SOLOMON (1975, 1975), *Assistant Professor of Business Administration*. B.A. and M.A., Case Western Reserve University; Ph.D., University of Rochester.
- OSCAR B. SOUTHARD II (1972, 1972), *Assistant Professor of English*. A.B., Texas Technological University; M.A. and Ph.D., Purdue University.
- RAYMOND W. SOUTHWORTH (1966, 1966), *Professor of Mathematics and Computer Science*. B.S., Worcester Polytechnic Institute; M.Eng. and D.Eng., Yale University.
- GEORGE R. SPACK (1976, 1974), *Instructor in Physical Education for Men*. B.A., College of William and Mary.
- WILLIAM B. SPONG, JR. (1976, 1974), *Dudley Warner Woodbridge Professor of Law*. LL.B., University of Virginia.

¹On leave, 1977-78.

FACULTY

- VASSILIOS C. STAMOUDIS (1976, 1976), *Assistant Professor of Marine Science*. B.S., University of Athens, Greece; Ph.D., Michigan State University.
- DAVID P. STANFORD (1972, 1967), *Associate Professor of Mathematics and Computer Science*. A.B., Hartwick College; M.A. and Ph.D., University of North Carolina, Chapel Hill.
- MARVIN M. STANLEY (1974, 1968), *Professor of Business Administration*. B.S., George Washington University; M.B.A., Harvard University; Ph.D., American University.
- EDWARD W. STEERS, III (1973, 1973), *Instructor in Physical Education for Men*. A.B., The Citadel, M.Ed., College of William and Mary.
- CLAUDIA STEVENS (1977, 1977), *Lecturer in Music*. A.B., Vassar College; M.A., University of California, Berkeley; D.M.A., Boston University.
- ALAN C. STEWART (1968, 1944), *Professor of Music*. A.B., Union College; M.A., Columbia University.
- PAUL K. STOCKMEYER (1977, 1971), *Associate Professor of Mathematics and Computer Science*. A.B., Earlham College; M.A. and Ph.D., University of Michigan.
- JAMES W. STONE, Captain (1977, 1977), *Assistant Professor of Military Science*. B.A. and M.A., Washington State University.
- JONATHAN G. STRAUSS (1976, 1976), *Assistant Professor of Economics*. B.Sc., University of Bradford; M.A., University of East Anglia; Ph.D., Iowa State University.
- IVAR E. STRAND, JR. (1975, 1975), *Assistant Professor of Marine Science*. B.A., University of Rochester; M.A., and Ph.D., University of Rhode Island.
- GEORGE V. STRONG (1971, 1967), *Associate Professor of History*. A.B., M.A. and Ph.D., University of North Carolina, Chapel Hill.
- TIMOTHY J. SULLIVAN (1977, 1972), *Professor of Law*. A.B., College of William and Mary; J.D., Harvard University.
- VINSON H. SUTLIVE, JR. (1972, 1972), *Associate Professor of Anthropology*. A.B., Ashbury College; B.D., Vanderbilt School of Religion; M.A., Scarrett College; Ph.D., University of Pittsburgh.
- WILLIAM F. SWINDLER (1958, 1958), *Professor of Law*. A.B. and B.S., Washington University, St. Louis; M.A. and Ph.D., University of Missouri; LL.B., University of Nebraska.
- JOHN W. SYKES (1970, 1963), *Associate Professor of Education*. B.S., New York State College; M.Ed., University of Virginia.
- PETER SYKES (1977, 1977), *Visiting Professor of Chemistry*. B.Sc. and M.Sc., University of Manchester; Ph.D., Clare College, Cambridge.¹
- JESSE S. TARLETON (1976, 1970), *Associate Professor of Business Administration*. B.S., Pennsylvania State University; M.B.A., College of William and Mary; Ph.D., Cornell University.
- THADDEUS W. TATE, JR. (1969, 1961), *Professor of History*. A.B. and M.A., University of North Carolina; Ph.D., Brown University.
- C. RICHARD TERMAN (1969, 1963), *Professor of Biology*. A.B., Albion College; M.S. and Ph.D., Michigan State University.
- N. BARTLETT THEBERGE, JR. (1974, 1974), *Assistant Professor of Marine Science*. B.S. and J.D., College of William and Mary; L.L.M., University of Miami.
- ELAINE M. THEMO (1971, 1966), *Associate Professor of Sociology*. A.B., Mount Holyoke College; M.A., University of North Carolina; Ph.D., American University.
- DAVID W. THOMPSON (1970, 1967), *Associate Professor of Chemistry*. B.S., Wheaton College; Ph.D., Northwestern University.
- JAMES J. THOMPSON, JR. (1977, 1971), *Associate Professor of History*. A.B., Columbia Union College; M.A. and Ph.D., University of Virginia.
- HANS O. TIEFEL (1975, 1975), *Associate Professor of Religion*. B.A., Wake Forest University; M.Div., Yale Divinity School; M.A. and Ph.D., Yale University.

¹1977-78 only.

FACULTY

- JANET TOMLINSON (1976, 1965), *Associate Professor of Physical Education for Women*. A.B., Beloit College; M.A., University of Iowa.¹
- LELAND E. TRAYWICK (1967, 1967), *Chancellor Professor of Business Administration*. A.B. and M.A., University of Missouri; Ph.D., University of Illinois.
- FRANCO TRIOLO (1975, 1975), *Assistant Professor of Modern Languages*. B.A. and M.A., University of Maryland; C.F., Università di Padova; Ph.D., University of Illinois.
- F. DONALD TRUESDELL (1963, 1960), *Professor of Music*. B.M. and M.M., University of Michigan; A.M.D., University of Rochester.
- SHEPARD YOUNG TYREE, JR. (1966, 1966), *Professor of Chemistry*. B.S., and Ph.D., Massachusetts Institute of Technology.
- PAUL UNGER (1968, 1968), *Professor of Education*. A.B., Western Michigan University; M.A. and Ph.D., University of Michigan.
- GEORGE M. VAHALA (1974, 1974), *Assistant Professor of Physics*. B.Sc., University of Western Australia; M.S. and Ph.D., University of Iowa.
- WILLIAM VAN ALSTYNE (1977, 1977), *Visiting Professor of Law*, B.A., University of Southern California; LL.B., Stanford University; Certificate of International Law, Hague Academy; LL.D., Wake Forest.
- WILLARD A. VAN ENGEL (1961, 1946), *Professor of Marine Science*, Ph.B. and Ph.M., University of Wisconsin.
- MARION G. VANFOSSEN (1970, 1967), *Professor of Sociology*. A.B., Blackburn College; M.A., Pennsylvania State University; Ph.D., Emory University.
- JACK D. VAN HORN (1977, 1970), *Associate Professor of Religion*. A.B., Ohio Wesleyan University; M.A. and Ph.D., Columbia University.
- CHARLES R. VARNER (1968, 1953), *Professor of Music*. B.M.E. and M.M., Northwestern University.
- W. LARRY VENTIS (1975, 1969), *Associate Professor of Psychology*. B.S., M.A. and Ph.D., University of Tennessee.
- CARL W. VERMEULEN (1971, 1966), *Associate Professor of Biology*. A.B., Hope College; M.S. and Ph.D., University of Illinois.
- HANS C. VON BAEYER (1975, 1968), *Professor of Physics*. A.B., Columbia College; M.Sc., University of Miami; Ph.D., Vanderbilt University.
- RICHARD E. WALCK (1976, 1970), *Professor of Law*. A.B., Pennsylvania State University; LL.B., University of Virginia.
- HELEN C. WALKER (1977, 1969), *Associate Professor of History*. A.B., College of William and Mary; M.A., Yale University.
- ALAN JOSEPH WARD (1976, 1967), *Professor of Government*. B.Sc., University of London; M.A., University of Connecticut; Ph.D., University of London.²
- STEWART A. WARE (1972, 1967), *Associate Professor of Biology*. B.S., Millsaps College; Ph.D., Vanderbilt University.
- JUNIUS ERNEST WARINNER, III (1963, 1963), *Instructor in Marine Science*. B.S. and M.A., College of William and Mary.
- WILLIAM H. WARREN (1972, 1970), *Associate Professor of Business Administration*. B.S., University of Richmond; M.S. and Ph.D., Purdue University.
- MARVIN L. WASS (1960, 1960), *Associate Professor of Marine Science*. B.S., Winona State College; M.S., Florida State University; Ph.D., University of Florida.
- NEILL WATSON (1976, 1976), *Assistant Professor of Psychology*. B.A., Yale University; Ph.D., Harvard University.
- KENNETH L. WEBB (1976, 1965), *Associate Professor of Marine Science*. A.B., Antioch College; M.S. and Ph.D., Ohio State University.

¹On leave, 1977-78.

²On leave first semester.

FACULTY

- CHRISTOPHER S. WELCH (1977, 1972), *Associate Professor of Marine Science*. B.S., Stanford University; Ph.D., Massachusetts Institute of Technology—Woods Hole Oceanographic Institute.
- ROBERT H. WELCH (1974, 1970), *Assistant Professor of Modern Languages*. A.B., Hampden-Sydney College; M.A. and Ph.D., University of Pennsylvania.
- ROBERT E. WELSH (1968, 1963), *Professor of Physics*. B.S., Georgetown University; Ph.D., The Pennsylvania State University.
- WALTER P. WENSKA (1972, 1972), *Assistant Professor of English*. A.B. and M.A., University of Hawaii, Ph.D., Stanford University.
- MILDRED BARRETT WEST (1968, 1959), *Associate Professor of Physical Education for Women*. B.S., Georgia State College for Women; M.A., University of Maryland.
- MARJORIE WESTERMAN (1977, 1977), *Assistant Professor of English*. A.B., Bryn Mawr College; M.Phil. and Ph.D., Yale University.
- RICHARD L. WETZEL (1975, 1975), *Assistant Professor of Marine Science*. B.S. and M.S., University of West Florida; Ph.D., University of Georgia.
- RONALD C. WHEELER (1976, 1972), *Associate Professor of Education*. B.S., Western Illinois University; M.Ed., University of Pittsburgh; Ph.D., University of Minnesota.
- ARTHUR B. WHITE (1974, 1974), *Professor of Law*. A.B. and LL.B., Washburn College of Law.
- SCOTT CAMERON WHITNEY (1972, 1972), *Professor of Law*. A.B., University of Nevada; J.D., Harvard University.
- JAMES P. WHITTENBURG (1977, 1977), *Assistant Professor of History*. B.A., University of Tennessee; M.A., Wake Forest University; Ph.D., University of Georgia.
- JAMES P. WHYTE, JR. (1958, 1958), *Professor of Law*. A.B., Bucknell University; M.A., Syracuse University; J.D., University of Colorado.
- PETER D. WIGGINS (1971, 1971), *Assistant Professor of English*. A.B., M.A. and Ph.D., Columbia University.
- STANLEY B. WILLIAMS (1948, 1948), *Professor of Psychology*. A.B. and M.A., University of California, Los Angeles; Ph.D., Yale University.
- STUART L. WILLIAMS (1972, 1972), *Assistant Professor of Business Administration*. B.A., Yale University.
- THOMAS H. WILLIAMS (1976, 1976), *Zollinger Professor of Business Administration*. B.B.A., The University of Cincinnati; M.S. and Ph.D., The University of Illinois.
- WALTER L. WILLIAMS, JR. (1977, 1972), *Professor of Law*. A.B., M.A., LL.B., University of Southern California; LL.M., J.S.D., Yale University.
- RICHARD A. WILLIAMSON (1975, 1970), *Professor of Law*. B.B.A., Ohio University; J.D., College of Law, The Ohio State University.
- JOHN H. WILLIS, JR. (1977, 1959), *Professor of English*. A.B., University of Virginia; M.A. and Ph.D., Columbia University.
- PATRICIA M. WINTER (1972, 1972), *Lecturer in Fine Arts*. B.F.A., Carnegie Institute of Technology; M.A., Western Reserve University.
- ROLF G. WINTER (1964, 1964), *Professor of Physics*. B.S., M.S. and D.Sc., Carnegie Institute of Technology.
- LAWRENCE L. WISEMAN (1977, 1971), *Associate Professor of Biology*. A.B., Hiram College; M.A. and Ph.D., Princeton University.
- FRANK J. WOJCIK (1965, 1965), *Instructor in Marine Science*. B.S., University of Massachusetts; M.S., University of Alaska.
- J. L. WOOD (1961, 1959), *Professor of Marine Science*. B.S., Massachusetts State College; M.S., University of Massachusetts; Ph.D., Columbia University.
- JAMES M. YANKOVICH (1974, 1974), *Professor of Education*. B.A., University of Richmond; M.Ed., University of Virginia; Ed.D., University of Michigan.
- LLOYD L. YOUNG, JR. Major (1976, 1976), *Assistant Professor of Military Science*. B.G.S., University of Nebraska, M.B.A., College of William and Mary.

STAFF

- MARIO D. ZAMORA (1973, 1973), *Professor of Anthropology*. A.B. and M.A., University of the Philippines; Ph.D., Cornell University.
- JOHN M. ZEIGLER (1971, 1971), *Professor of Marine Science*. B.A., University of Colorado, Boulder; Ph.D., Harvard University.
- JOSEPH R. ZEPKIN (1968, 1968), *Lecturer in Law*. A.B. and B.C.L., College of William and Mary.
- PAUL LEON ZUBKOFF (1970, 1970), *Associate Professor of Marine Science*. B.S., University of Buffalo; M.S., George Washington University; Ph.D., Cornell University.
- DAVID E. ZWERNER (1968, 1968), *Instructor in Marine Science*. B.S., George Washington University; M.A., College of William and Mary.

Earl Gregg Swem Library

- ALVA WARE STEWART (1971, 1971), *Associate Librarian*. A.B., University of North Carolina; M.A., Duke University; M.S.L.S., University of North Carolina.
- KATHRYN JOAN BLUE (1968, 1968), *Assistant Catalog Librarian*. B.A., Cornell College; M.A., University of Wisconsin.
- BETH ANN BLILER (1974, 1974), *Assistant Reference Librarian*. A.B., College of William and Mary; M.L.S., Indiana University.
- MARY LOUSIE BROWN COBB (1970, 1967), *Catalog Librarian*. B.A., Wake Forest College; M.L.S., George Peabody College for Teachers.
- MARGARET CELESTE COOK (1966, 1966), *Curator of Manuscripts*. B.A., Sweet Briar College; M.A., College of William and Mary.
- KAY JEAN DOMINE (1974, 1974), *College Archivist*. B.A., University of Michigan; M.A., University of Wisconsin.
- SARAH VIRGINIA GRAY (1964, 1964), *Periodicals Librarian*. A.B., Duke University; M.S.L.S., University of North Carolina.
- HENRY DALE GRUNDER (1967, 1967), *Curator of Rare Books*. B.A. and M.A., Miami University; M.A., University of Chicago.
- NANCY STEED HARRIS (1976, 1975), *Librarian*, Virginia Associated Research Campus. B.A., University of North Carolina; M.L.S., University of Maryland.
- BERNA JUDITH HEYMAN (1972, 1972), *Assistant Catalog Librarian*. A.B., Washington University; M.S.L.S., Simmons College.
- MERLE ANN KIMBALL (1973, 1973), *Assistant Catalog Librarian*. B.S., University of Wyoming; M.L.S., Texas Woman's University.
- SANDRA KAY PETERSON (1974, 1974), *Documents Librarian*. B.A., Kearney State College; M.L.S., University of Pittsburgh.
- DORTHA HENDERSON SKELTON (1974, 1971), *Reference Librarian*. B.A., University of Tennessee; M.S.L.S., Atlanta University.
- ROBERT CURTIS STEVICK (1971, 1971), *Assistant Reference Librarian*. B.S., Washington and Jefferson College; M.L.S., University of Pittsburgh.
- AILENE ANNE ZIRKLE (1964, 1963), *Acquisitions Librarian*. A.B., Madison College; M.L.S., George Peabody College for Teachers.

Health Services

Richard D. Cilley, M.D. (1973-1973)
B.S. Tufts University
M.D. Boston University

Director of Student Health Services

STAFF

Juliette S. Karow, M.D. (1974-1974) B.A. College of Wooster M.D. University of Michigan	Staff Physician
June S. Henderson, M.D. (1975-1975) B.S. College of William and Mary M.D. Medical College of Virginia	Staff Physician
Mrs. Catherine K. Simmons, B.S. (Nursing) Univ. of Virginia	Head Nurse
Mrs. Margaret L. Edmunds, R.N.	Staff Nurse
Mrs. Charlotte R. Bathurst, R.N.	Staff Nurse
Mrs. Carol A. Gleason, R.N.	Staff Nurse
Mrs. Linda L. Dalton, R.N.	Staff Nurse
Mrs. Patricia Buoncristiani, R.N.	Staff Nurse
Mrs. Anna F. Powell, R.N.	Staff Nurse
Mr. Philip C. Spiggle, B.S. (Pharmacy)	Staff Pharmacist
Mrs. Lois Byrd	Medical Secretary
Mrs. Rosa Lee Thomas	Receptionist

Center for Psychological Services

Jay L. Chambers, Ph.D. Ph.D. University of Kentucky	Director, Center for Psychological Services
Miriam W. Cardi, Ph.D. Ph.D. The Ohio State University	Clinical Psychologist
Patricia A. Ondercin, Ph.D. Ph.D. University of Florida	Clinical Psychologist
Philip W. Meilman Ph.D. University of North Carolina at Chapel Hill	Clinical Psychologist
W. Larry Ventis, Ph.D. Ph.D. University of Tennessee	Clinical Psychologist
Neill P. Watson, Ph.D. Ph.D. Harvard University	Clinical Psychologist
Mary Beth Surma, M.Ed.	Psychometrist
Diana Tennis	Secretary

II. ADMISSION TO THE COLLEGE

Within the limits of its facilities and its obligations as a state university, the College of William and Mary opens the possibility of admission to all qualified students without regard to sex, race, color, age, religion, national origin, or handicap.

UNDERGRADUATE ADMISSION

Application forms and Admissions viewbooks, which contain detailed information regarding undergraduate admission including a profile of recent entering students, may be obtained by writing to: Office of Admissions, College of William and Mary, Williamsburg, Virginia, 23185.

Applications for regular admission should be submitted by February 1 for the fall semester and December 1 for the spring semester. Early Decision applications to the freshman class should be submitted by November 1 of the final year in secondary school. Applications submitted after these dates will be evaluated in terms of the admissions positions available at the time of application. No one will be admitted as a degree candidate later than one week prior to registration.

Since more students apply than can be accommodated, the College uses a selective process of admission. Through this process the applicant's total educational record is considered in relation to other students applying in an attempt to admit those with the strongest credentials. Since all applicants are considered in relation to each other, all notification letters are sent at the same time; those interested in Early Decision will learn of the decision by the Office of Admissions, on December 1; those wishing regular admission for the fall semester, on April 1; and those wishing to attend the spring semester, around December 15.

Tests of the College Entrance Examination Board

Freshman applicants are required to take the College Entrance Examination Board Scholastic Aptitude Test. In addition, it is strongly recommended that freshman applicants take three achievement tests of the College Entrance Examination Board; these may be a factor in the admission decision. Students who wish exemption from the college writing requirement on the basis of scores must take the English Composition Achievement Test, preferably the Test that includes a twenty-minute writing exercise and which is given in December. Students can meet the college foreign language requirement either by completing four years of one foreign language in secondary school or by scoring 600 or above in the achievement test in a modern foreign language (this is not an admissions requirement). Applicants intending to continue the foreign language begun in secondary school must take the reading achievement test in a foreign language. The placement of entering students in foreign language courses will be made on the basis of these test scores. Students who have completed secondary school courses in Chemistry or Physics and who wish to be placed in advanced sections of these courses should take the achievement tests in these areas.

Admission of Undergraduate Transfer Students

Transfer students are admitted for both the fall and the spring semesters. In order to be considered for admission, the applicant must have maintained at least a 2.5 grade point average on a 4.0 scale in the courses taken for credit in other institutions. All transfer applicants must be in good standing and eligible to return to their last institution of full-time attendance. Students who have completed fifteen or more semester hours of work at an accredited institution are not normally required to take the Scholastic Aptitude and Achievement Tests of the College Entrance Examination Board. Students who have not fulfilled the College's language requirement will, however, be required to take the reading achievement exam if they plan to continue in a language previously begun—(Students who have taken language courses in college are not required to take this exam). The placement of students in the required language courses is determined on the basis of these test scores.

ADMISSION TO THE COLLEGE

Early Admission

The College is willing to admit as freshmen a limited number of students with outstanding records at the end of their junior year in high school. Such students are encouraged to seek diplomas from their secondary schools after completing their freshman year.

Concurrent Courses

In addition to full early admission, the College allows qualified local students to take courses for college credit concurrently with their secondary school program. Initial approval for this privilege should be requested through the school administrations and then individuals should request applications for unclassified status from the Office of Admissions.

Admission as a Part-time Degree Student

An applicant is eligible for admission as a part-time degree student if the applicant lives in the Williamsburg area, meets the usual admissions standards of the College, and can show compelling reasons why full-time status is not feasible. In determining whether part-time status is warranted, consideration will be given to the applicant's background; normally an applicant will not be admitted as a part-time degree student if the applicant was a full-time student during the preceding academic year. A part-time degree student must earn a minimum of 12 hours each year (September through August) and must complete all degree requirements in effect at the time of entrance as a part-time degree student and all concentration requirements in effect at the time of the declaration of concentration.

No more than 20 part-time degree students will be admitted in any one year. They will be assigned to advisors who will stress the importance of building a coherent program. Part-time degree students will not be eligible for residence hall space unless space is available after all full-time students have been considered. Students who wish to apply for part-time degree status should specify this in requesting application forms from the Office of Admissions.

Admission to Unclassified Status

A student who does not intend to pursue a degree but wishes to take courses for credit during the day session may apply for admission as an Unclassified student. Students admitted to Unclassified status who later wish to become candidates for an undergraduate degree must submit a petition to the Office of Admissions before completing 30 semester hours, the maximum number applicable in this status. The minimum requirement for admission is the same as for those seeking degree status. A student once admitted as a degree candidate at the College is not eligible to be considered for admission as an Unclassified student. Students who wish to have Unclassified status should specify this in requesting application forms from the Office of Admissions.

Readmission

Students who are in good standing with the College but have not been in attendance in the day session for one or more semesters must submit an application for readmission and be readmitted by the Office of Admissions before they are permitted to register for classes in the day session. Former students who apply before February 1 for the fall semester and before December 1 for the spring semester will be given priority consideration for space available. Students who are not in good standing with the College should refer to the section on academic standing (page 49).

Delayed Enrollment for Admitted Freshmen

Students who are offered admission to the freshman class may postpone their enrollment for one year. Admitted freshmen who choose this option must submit a form by February 1 requesting that their application be reopened for the fall semester. These students will be guaranteed space if they satisfy previous requirements made as

ADMISSION TO THE COLLEGE

conditions of their original admission. They must have an honorable record in the intervening year. Assurance of future admission does not apply to students who enroll in a college or university during the intervening period; in such cases, it will be necessary to consider the student as a transfer applicant.

Admission to Audit Status

Students who wish to audit courses in the day session with no credit should contact the Office of the Dean of the Faculty of Arts and Sciences to obtain the appropriate forms for permission to audit.

Admission to the Evening College and Summer Sessions

Applicants should write to Director, Evening College and Summer Sessions for a catalog and application form. The admission to one of these divisions of the College does not entitle the student to admission to the regular day session or degree status unless an application is submitted and approved by the Office of Admissions.



III. FINANCIAL ASSISTANCE, ACADEMIC AND SPECIAL SCHOLARSHIPS FOR STUDENTS

The Office of Student Aid administers two general types of financial awards to undergraduates: (a) financial assistance based on financial need, and (b) academic and special scholarships. Complete information regarding need-based financial assistance is contained in the pamphlet, "Opportunities for Student Financial Assistance." Requests for this pamphlet and all correspondence regarding financial awards except for ROTC should be addressed to:

Director of Student Aid
College of William and Mary
Williamsburg, Virginia 23185

The Department of Military Science provides scholarships and other financial assistance to students enrolled in the College's Army ROTC Program. (see page 111). Requests for information should be directed to:

Department of Military Science
College of William and Mary
Williamsburg, Virginia 23185

FINANCIAL ASSISTANCE

Financial assistance except for ROTC is available to undergraduates who cannot otherwise meet the costs of an education at the College. Demonstrated need is established through the analysis of the Financial Aid Form (FAF) processed by the College Scholarship Service (CSS). Such assistance, when added to the contributions that can reasonably be expected from the student, his family, and any available outside sources, should enable the undergraduate to meet the cost of attending the College.

Assistance is offered for one year only but may be renewed for each succeeding year if need continues and the undergraduate otherwise qualifies. Renewal requires an institutional application and the completion of the FAF for each succeeding year.

Applicants for financial assistance at the College of William and Mary, in addition to the FAF, MUST apply for the Basic Educational Opportunity Grant and Virginians MUST also apply for the College Scholarship Assistance Program.

Financial assistance is "packaged" to include the offer of part-time employment, the offer of a student loan; and grant (scholarship), singly or in combination.

Transfer students adhere to the same application procedure as entering undergraduates.

Deadline for filing the FAF with CSS for "Early Decision" applicants is November 1. For "Regular Decision" applicants, the deadline is February 15. For undergraduate applicants for renewal of financial assistance, the deadline is May 1.

ACADEMIC AND SPECIAL SCHOLARSHIPS

Academic scholarships are awarded solely on the basis of academic achievement at William and Mary to the nineteen ranking scholars of the College. These Merit Scholarships are not available to entering undergraduates.

Special scholarships are awarded to undergraduates who demonstrate outstanding achievement by various departments within the College. These awards are not usually available to entering undergraduates.

Foreign Exchange Scholarships include the University of Exeter and University of St. Andrews and the Drapers' Company awards. Each year two outstanding graduates of William and Mary will be selected by the College for a two-year period of study at Oxford, Cambridge, or another British university. This opportunity is made available by agreement between William and Mary and the Drapers' Company of London. In exchange one or two British students will be selected by the Drapers' Company for undergraduate study toward a bachelor's degree at the College of William and Mary. The cost of tuition and living expenses is provided for each student.

FINANCIAL ASSISTANCE FOR STUDENTS

The College of William and Mary also has an agreement with Exeter University in England and the University of St. Andrews in Scotland for an annual exchange of students. Under this plan an outstanding William and Mary student is given the opportunity to study at one of the universities for one year. One student will be selected for each university. The Exeter scholarship is open to students who are rising juniors or who are members of the graduating class; the St. Andrews is available only to rising juniors. All college fees (tuition, registrations, room and board) will be waived for these exchange students. They will live in one of the Residence Halls of Exeter or St. Andrews. One student from Exeter and one from St. Andrews will come to the College of William and Mary for the same period.

The College offers a student exchange scholarship with the University of Muenster in West Germany. Under this exchange plan one William and Mary student is given the opportunity to study at Muenster for one academic year. All University fees (tuition, room and board) are paid by the University of Muenster. The scholarship is open to William and Mary students beyond the freshman year who are in good standing and who possess a high proficiency in the German language. One student from Muenster enrolls at the College for the same period.

ASSISTANCE SOURCES

An offer of financial assistance may include a loan and a grant from the Federal college-based programs; a grant from State funds appropriated to the College by the General Assembly of Virginia; and, grant(s) from institutional funds made possible through the generosity of friends and alumni of the College.

Part-Time Employment includes jobs at the College and in the city of Williamsburg. Colonial Williamsburg provides part-time employment through the Student Aid Office. In order to maintain proper balance between hours of employment and academic loads, the College requires that all student employment on the campus or in the city be assigned by the Student Employment Coordinator in the Student Aid Office. The normal work load is ten to fifteen hours per week. No student may work more than fifteen hours per week on campus without permission from the Director of Student Aid.

Employment for Spouses of regularly enrolled students is also available as part of the College's overall financial assistance program. Inquiries concerning this type of employment should be directed to the College's Director of Personnel, rather than the Student Aid Office.

PROGRAMS OF FINANCIAL ASSISTANCE

The College Scholarship Assistance Program (CSAP), available to Virginians enrolled in postsecondary education, requires that the State Council of Higher Education be identified as a recipient of the analysis report (FAFNAR). The filing deadline for this program is March 31; Federally funded programs include the Basic Education Opportunity Grant (BEOG), which requires a separate application; the National Direct Student Loan (NDSL); Supplemental Educational Opportunity Grant (SEOG); Guaranteed Student Loan (GSL); and the College Work-Study Program (CWSP). Applicants who are eligible to apply for CSAP and BEOG programs *MUST* apply for these programs when applying for financial assistance at William and Mary. Failure to do so can result in a reduced offer of assistance. See your guidance counselor for applications and deadlines.

Programs for Federal Beneficiaries are administered by the College for certain eligible students. These programs include Veterans' Educational Assistance, Children's Educational Assistance, Social Security Benefits for school children, and others. Persons who are qualified for such programs should work out the details with the appropriate federal agency prior to registration at the College.

IV. TUITION AND OTHER EXPENSES

THE COLLEGE RESERVES THE RIGHT TO MAKE CHANGES IN ITS CHARGES AT ANY TIME, AFTER APPROVAL BY THE BOARD OF VISITORS.

Payment of Accounts

Charges for tuition and the general fee, as well as fees for room and board, are payable in advance, by the semester, with the remittance being made by check, drawn to the College of William and Mary. A student will not be permitted to complete registration if there is any unpaid balance on the individual's account in the Treasurer's Office.

Payments may be made by mail, upon receipt of the student's statement of account. Accounts are due within twenty days after receipt of the statement.

Refunds to Students Who Withdraw from College

Subject to the following regulations and exceptions, all charges made by the College are considered to be fully earned upon completion of registration by the student.

1. A student who withdraws within the first five-day period immediately following the scheduled registration period is entitled to a refund of all charges, with the exception of \$50 which shall be retained by the College to cover the costs of registration, subject to Item #5, below. (Such refunds shall not include any deposits or advance payments which may have been required by the College as evidence of the student's intention to enroll.)
2. A student who withdraws at any time within the next following 25 days after the scheduled registration period shall be charged 25% of the tuition and general fee plus 25% of the semester's room rent, subject to Item #5, below.
3. A student who withdraws at any time within the second thirty-day period after the scheduled registration period shall be charged 50% of the tuition and general fee, plus 50% of the room rent for a semester, subject to Item #5, below.
4. A student who withdraws at any time after sixty calendar days following the scheduled registration period shall be charged the full tuition and general fee, room rent, and board for a semester, subject to Item #5, below.
5. No refunds will be made to a student who has been required by the College to withdraw, regardless of the date of withdrawal.
6. No refunds will be made to a student who withdraws unofficially.
7. No refunds of tuition will be made to part-time students, regardless of the circumstances.

A part-time student at the undergraduate level is defined as one who is enrolled for 11 credit hours or less. At the graduate and/or law school level, a part-time student is one who is enrolled for 8 credit hours or less. An exception is that a student at the Virginia Institute of Marine Science who is enrolled for 11 credit hours is regarded as a *full-time* graduate student and is subject to the full charge for tuition and fees.

8. In cases of official withdrawal, not required by the College, during the first sixty calendar days following the scheduled registration period, charges for board shall be calculated on a pro-rata basis, determined by the date of official withdrawal, provided the Dining Commons Card is surrendered at the Treasurer's Office on this date.

Credits on Accounts of Holders of Scholarships

Students holding scholarships are required to pay all fees less the value of the scholarships which they hold.

Withholding of Transcripts and Diplomas in Cases of Unpaid Accounts

Transcripts or any other information concerning scholastic records will not be released until college accounts are paid in full. Diplomas will not be awarded to persons whose college accounts are not paid in full.

TUITION AND OTHER EXPENSES

The tuition and General Fee (\$515.50 per semester for full-time State students and \$1,239.50 for full-time out-of-State students) is a payment towards the general maintenance and operating costs of the College including recreational and health-facilities. (Board and room charges are additional.)

Tuition for part-time students, at both the undergraduate and graduate levels, is as follows:

- \$34 per semester hour for Virginia students
- \$83 per semester hour for out-of-State students

Regularly enrolled degree-seeking students of the College will be charged these rates during the regular session for part-time work, based on their established domiciliary status.

Rates for students who enroll in Evening College or in Summer Session will be charged on the same basis.

Part-time students who are not regularly enrolled at the College of William and Mary, and for whom, therefore, no domiciliary status previously has been determined, will be charged on the basis of their satisfactorily established domiciliary status. (See statement below regarding in-State, out-of-State classification for fee purposes.)

Auditing fees are the same as those specified for part-time students, unless the auditor is a full-time student.

The legislative Act affecting residency is as follows:

Be it enacted by the General Assembly of Virginia, that the domicile of an unemancipated minor may be the domicile of either parent; provided, however, that if one parent has custody, the domicile of an unemancipated minor shall be the domicile of the parent having custody. If there is no surviving parent or the whereabouts of the parents are unknown, then the domicile of an unemancipated minor shall be the domicile of the legal guardian of such unemancipated minor if there are no circumstances indicating that such guardianship was created primarily for the purpose of conferring a Virginia domicile on such unemancipated minor.

No person in attendance at a State institution of higher education shall be entitled to reduced tuition charges unless such person is and has been domiciled in Virginia for a period of at least one year immediately prior to the commencement of the term, semester or quarter for which any such reduced tuition charge is sought.

A person who enrolls in any such institution while not domiciled in Virginia does not become entitled to reduced tuition charges by mere presence or residence in Virginia. In order to become so entitled, any such person must establish that, one year before the date of alleged entitlement, he or she was at least eighteen years of age or, if under the age of eighteen was an emancipated minor, and had abandoned his or her old domicile and was present in Virginia with the unqualified intention of remaining in Virginia for the period immediately after leaving such institution and indefinitely thereafter.

A person who is classified or classifiable at the date of his or her marriage as eligible to receive the privileges herein described, may receive or continue to receive such privileges until he or she abandons his or her Virginia domicile other than through any presumption of law attaching to the ceremony of marriage.

A student who is not a member of the armed forces and who is not otherwise eligible for reduced tuition charges and whose spouse or parent is a member of the armed forces stationed in this State pursuant to military orders shall be entitled to reduced tuition charges if such spouse or either parent, for a period of at least one year immediately prior to and at the time of the commencement of the term, semester or quarter for which reduced tuition charges are sought, has resided in Virginia, been employed full time and paid personal income taxes to Virginia. Such student shall be eligible for reduced tuition charges through such parent under this section only if he or she is claimed as a dependent for Virginia and federal income tax purposes. Such student shall be entitled to reduced tuition charges so long as such parent or spouse continues to reside in Virginia, to be employed full time and to pay personal income taxes to Virginia.

Entitlement to reduced tuition charges must be established by convincing evidence and the burden of establishing entitlement shall be on the person claiming such entitlement.

TUITION AND OTHER EXPENSES

Procedure for Determination of In-State Tuition Eligibility

I. Application for In-State Tuition Eligibility

The Treasurer or his delegate shall provide appropriate forms to be completed by all persons who wish to claim eligibility for in-state tuition. Such forms shall be prepared and from time to time revised in consultation with the Chairman of the Residency Status Appeals Board.

A. Entering Students—Such forms shall be furnished to entering students claiming eligibility for in-state tuition prior to their matriculation, and shall be completed and returned by them to the Treasurer's Office. A student to whom such a form was sent who fails to complete and return such form by the close of the add-drop period shall be deemed to have waived classification as an in-state student for the semester involved. A student claiming entitlement to in-state tuition to whom such a form was not furnished and to whom a bill for non-resident tuition was mailed or given, shall, on or before the close of the add-drop period, request such form and complete and return it within three calendar days of its being furnished him. Failure to do so shall likewise be deemed a waiver of classification as an in-state student for the semester involved.

B. Matriculated Students—Matriculated students who have been classified as ineligible for in-state tuition shall remain in that classification until changed. A student desiring a change in classification shall, not later than five calendar days after the first day of classes of the semester for which the change in status is sought, request the appropriate form from the Treasurer's Office and shall complete and return such form within ten calendar days of its being furnished him. His failure to do so shall be deemed a waiver of classification for in-state tuition status for the semester involved.

II. Initial Evaluation of Application for Classification

The Treasurer on his delegate shall initially evaluate all requests for in-state tuition classification or re-classification and shall, where the student's eligibility for in-state tuition is clear within the meaning of Section 23-7 of the Code of Virginia, approve such classification and inform the student of such approval either by letter, or by bill or amended bill reflecting such determination. Where the student's eligibility for in-state tuition is not clear, the Treasurer, or his delegate, shall refer the matter to the Status Reviewing Officer. A student who receives an adverse decision by the Treasurer may, within ten calendar days by written request, obtain a hearing by the Status Reviewing Officer.

III. Review by the Status Reviewing Officer

The Status Reviewing Officer, who shall be appointed by the President and shall be legally trained, shall consider all status determinations as are referred to him pursuant to Section II above, and make such determinations as he may deem proper under Section 23-7 of the Code of Virginia, and shall communicate such determination in writing to the student with a copy to the Treasurer's Office. If the determination be favorable to the student, the Treasurer's Office may have five calendar days in which to request an appeal, which request shall be addressed to the Chairman of the Residency Status Appeals Board. If the determination is unfavorable to the student he may, within 10 calendar days, request in writing an interview with the Status Reviewing Officer shall be awarded him, and at which time the student may be accompanied by counsel and may present such evidence or explanations as he deems appropriate. The Status Reviewing Officer shall thereupon or as soon thereafter as is reasonably possible, and with due regard to matters brought out at the interview, affirm or modify his previous determination and inform the student of his action. If the matter is again determined adversely to the student, the Status Reviewing Officer shall inform the student of his right to appeal to the Residency Status Appeals Board, which appeal must be made within 10 calendar days of the date of the final determination by the Status Reviewing Officer. Failure of any student notified of an adverse determination to request an interview or make an appeal

TUITION AND OTHER EXPENSES

within the time limits provided herein shall be deemed a waiver of classification for in-state tuition for the semester involved, unless a satisfactory excuse for the delay is presented and accepted by the Chairman of the Residency Status Appeals Board.

IV. Appeal

The Residency Status Appeals Board shall consist of three persons of faculty rank, none of whom shall be employed by the offices of the Vice President for Business Affairs. They shall be appointed by the President, who shall also designate a Chairman. Appeals to the Board shall be in writing and addressed to the Chairman and need take no particular form. The Chairman shall, upon receipt of an appeal, schedule a hearing at a time convenient to the parties, and shall, in addition to consideration of whatever documents are deemed relevant, consider such statements as the appellant may wish to make and such evidence, oral or otherwise, as he may present. The hearing shall not be a review of the findings of the Status Reviewing Officer, but a hearing *de novo*. A student appellant may be represented by counsel. However, the Chairman may invite the Status Reviewing Officer to appear and communicate his evaluations and observations and/or may request a written statement from the Status Reviewing Officer regarding the reasons for his determinations. Upon completion of the hearing, the Board shall make such determination as is deemed proper and communicate the same in writing to the appellant with reasons therefor. The determination of the Board shall be dispositive of the matter unless, in the case of a student appellant, an appeal is made in writing to the President within 5 calendar days of the determination by the Appeals Board. The President, or his impartial delegate acting in his behalf, in considering the appeal shall review only the documentary data involved unless an interview with the student is deemed appropriate. The President or his delegate shall thereupon decide the matter and make the final decision.

Board

The College operates two cafeterias, the Dining Commons and the Wigwam Snack Bar, together seating over 1300 persons.

All students who are officially classified as freshmen¹ and who are housed in student residences (including residents of the College-owned sorority and fraternity houses) will be charged for board at the rate of \$387 per student per semester.

Each freshman will be issued a Dining Commons Card which entitles that student to three meals daily during the semester. The Christmas and Thanksgiving recesses during the first semester and the spring recess in the second semester are not included in the period for which board is charged. The Dining Commons Card will be usable in the Wigwam Snack Bar on an announced basis.

Freshmen are required to board in the Dining Commons on a seven-day, twenty-one meal plan. It is optional for students not living in student residences and students other than freshmen as to whether or not they board in the College Dining Commons. All others may elect to board in the Dining Commons by the semester, in which case the charge for board will be \$387 per student per semester for the seven-day, twenty-meal plan; or \$311 per student per semester for the seven-day, fifteen-meal plan; or \$231 per student per semester for the five-day, ten-meal plan.

In cases of withdrawal from the College during the first sixty days following the scheduled registration period, the student will be given a refund calculated on a pro-rata basis determined by the date of official withdrawal, provided the Dining Commons Card is surrendered to the Treasurer's Office on this date.

Owing to uncertain conditions prevailing with respect to the cost of food supplies and of food service, the College reserves the right to change its rates for board at any time throughout the year to meet such additional costs.

¹For boarding purposes "Freshmen" is interpreted to mean those students in their first year of residence in College.

TUITION AND OTHER EXPENSES

Room Rent

Room rent in the student residences varies from \$320.00 to \$420.00 per semester depending on the size of the room, location, bath, etc. Living in student residences is optional for sophomores, juniors, and seniors.

The College student residences are not open for occupancy during the Christmas Holiday period. During the Thanksgiving and Spring Recesses, selected buildings are open on a limited basis for students who need to remain in the area.

Students Withdrawing from College Facilities: A student who continues enrollment in College, but who withdraws from College facilities at any time following the date of the semester registration, will receive no refund for the semester's room rent unless the total occupancy level of the College's residences remains the same. This regulation will apply to all students regardless of the reasons for their withdrawal from College facilities.

INCIDENTAL EXPENSES

It is impossible to estimate the exact cost to students of clothing, travel and incidental expenses. These are governed largely by the habits of the individual. The cost of books depends on the courses taken.

Money for books cannot be included in checks covering college expenses; books should be paid in cash or by separate check when purchased. Checks for books should be made payable to the William and Mary Bookstore.

NON-RECURRING FEES

Application fee	\$10.00
Room Deposit	50.00
Room Damage Deposit	75.00
Room change penalty fee	25.00
Diploma fee	10.00
Cap and gown rent, bachelor and master candidates	5.00
Cap and gown rent, doctoral candidates	6.00
Academic hood rent to Seniors and Graduate students	1.00

Application Fee—A non-refundable processing fee of \$20.00 is required with undergraduate freshmen and transfer applications for admission to the College. *This fee is not credited to the student's account.* Students applying for admission from Christopher Newport and Richard Bland Colleges are excluded from payment of this fee.

Room Deposit—For returning students, a non-refundable deposit of \$50.00 is required by the College for a student to request a room. This payment is made to the Treasurer's Office and is applied to the student's rent account. Although payment of this deposit by returning students does not guarantee a place on campus, the College makes every effort to accommodate all undergraduate students who desire College housing.

This deposit may be made by students already enrolled at any time after the beginning of the second semester, but must be paid before February 24, 1978. No rooms will be reserved for students who have not paid their room deposit by the specified date.

Students enrolling for the first time may not make a room reservation deposit until they have been notified of their admission to the College.

Room Damage Deposit—This deposit is refundable upon leaving College housing, subject to assessments.

Room assignments for students and changes in rooms are made through the Office of Residence Hall Life.

Room Change Penalty Fee—Students who change rooms without the approval of the Office of Residence Hall Life will be charged a penalty of \$25.

Diplomas—The charge for diplomas for all degrees is \$10.00. This is payable on or before April 30.

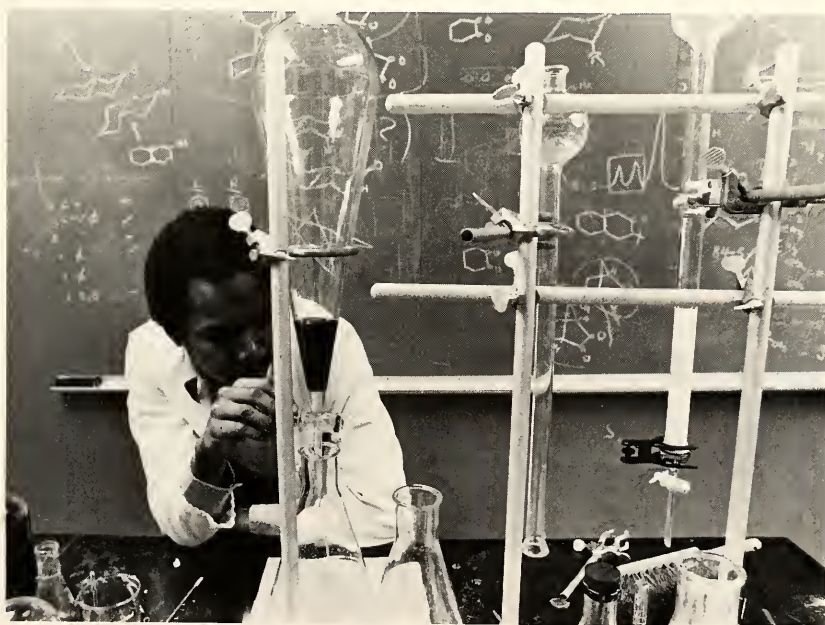
Academic Costumes—Senior and Graduate students may procure caps and gowns from

TUITION AND OTHER EXPENSES

the College rental supplier just prior to graduation. The rental fee, payable to the supplier, is \$5.00 for master candidates, and \$6.00 for bachelor and doctoral candidates. Academic hoods will be provided to all degree recipients by the College just prior to graduation at a rental fee of \$1.00. All fees are payable upon receipt of the items mentioned.

SPECIAL FEES

Special additional fees are charged for Applied Music courses and certain physical education courses such as Scuba Diving, Karate, and Horseback Riding. The current fee for Applied Music is \$90 per semester for one 30-minute lesson per week and \$180 per semester for one hour lesson per week. Fees for other special courses are determined by the demand and by the arrangements which are necessary to support such demand.



V. REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

THE College of William and Mary confers in course the following degrees, each under the jurisdiction of the Faculty or School indicated:

Faculty of Arts and Sciences: Bachelor of Arts (A.B.), Bachelor of Science (B.S.), Master of Arts (M.A.), Master of Science (M.S.), and Doctor of Philosophy (Ph.D.).

The M.A. is offered in biology, chemistry, English, government, history, marine science, mathematics, physics, psychology and sociology; the M.S. in applied science, mathematics and physics; the Ph.D. in history, marine science and physics.

School of Business Administration: Bachelor of Business Administration (B.B.A.), and Master of Business Administration (M.B.A.).

School of Education: Master of Arts in Education (M.A.), Master of Education (M.Ed.), and Doctor of Education (Ed.D.).

School of Law: Juris Doctor (J.D.), and Master of Law and Taxation (L. & T.M.).

School of Marine Science: Master of Arts (M.A.), and Doctor of Philosophy (Ph.D.).

The requirements for the baccalaureate degree of Bachelor of Business Administration will be found on page 164 of this catalog. The requirements for graduate degrees are stated in the Graduate Catalog of the Faculty of Arts and Sciences or the Catalogs of the individual Schools.

REQUIREMENTS FOR DEGREES

DEGREES OF BACHELOR OF ARTS AND BACHELOR OF SCIENCE

The undergraduate degrees of Bachelor of Arts and Bachelor of Science are liberal arts degrees. A liberal education, although it has no single fixed definition, is more than a haphazard accumulation of courses. Its essential purpose is to liberate and broaden the mind, to produce men and women with vision and perspective as well as specific practical skills and knowledge. The major foundations on which a liberal education must be built are well-recognized. For these reasons, the College requires each undergraduate to plan, with the help of a faculty advisor and within the framework of broad general degree requirements, a program of liberal education suited to his particular needs and interests.

The general degree requirements set forth below are designed to permit a high degree of flexibility for each student in planning his particular program of liberal education within broad basic limits. In this planning, a student and his advisor should build upon his previous preparation. A freshman should pursue at least one study in which he has interest and competence at the highest level his preparation allows. As early as possible he should explore some studies with which he is unfamiliar, in order to open up new interests and opportunities. Finally, he should take care to lay the foundations for his future specialization, in college or beyond in graduate or professional school, by anticipating specific prerequisites.

A liberal education presupposes certain *proficiencies*. Foremost among these is the ability to express oneself clearly both in speech and writing, for clear expression goes hand in hand with clear thinking. Another invaluable foundation of a liberal education is some experience with a foreign language, at least to the point where a student begins to see for himself the cultural as well as practical values of foreign language study. Since students entering college differ widely in their previous preparation in these respects, the proficiency requirements of the College establish only basic minimums; but each student is encouraged to proceed beyond these minimums to whatever extent his interests and abilities suggest.

The *Area Requirements* are designed to ensure that every student will explore at least on an introductory level each of the broad areas of arts and sciences: the humanities, the social sciences, and the natural sciences and mathematics. In one of these areas every student will continue this exploration through the required sequence of two advanced courses building upon the two introductory ones.

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

Finally, in the area of his Concentration, every student is required to pursue in depth the exploration of a specific academic discipline or two or more related ones through an interdisciplinary concentration. Here he has the fullest possible opportunities for both independent study and work in a Departmental Honors program, as well as for regular course work.

The Faculty of Arts and Sciences of the College determines the degree requirements for the A.B. and B.S. degrees, including the determination of the regulations governing academic standards, grading, and class attendance. Obligation to its educational mission gives to the College the right and responsibility, subject to the employment of fair procedures, to suspend, dismiss or deny continuance of a student whose academic achievement does not meet established College standards.

Requirements for degrees are stated in terms of semester credits which are based upon the satisfactory completion of courses of instruction. Usually one semester credit is given for each class hour a week through a semester. Not less than two hours of laboratory work a week through a semester will be required for a semester credit.

A continuous course covers a field of closely related material and may not be entered at the beginning of the second semester without approval of the instructor.

REQUIREMENTS FOR THE DEGREES OF A.B. AND B.S.

A. GENERAL REQUIREMENTS

One hundred and twenty-four semester credits are required for graduation. Of these one hundred and twenty-four semester credits, one hundred and twenty must be in academic subjects and four in a program of activities in Physical Education. A minimum of 240 quality points in academic subjects is required. A student must make a minimum quality point average of 2.0 for all courses at William and Mary in the field of concentration for which he receives a grade of A, B, C, D or F.

No degree will be granted by the College until the applicant has made a minimum of sixty semester credits in residence at the College in Williamsburg. This period must include the last two semesters in which credits counted toward the degree are earned.

A student must fulfill the general degree requirements set forth in the catalog at the date of entrance to the College, and he must fulfill the concentration requirements in effect when the choice of concentration is declared. A student who fails to graduate within six calendar years of the date of entrance to the College relinquishes the right to graduate under the requirements set forth in the catalog at the time of entrance, and must fulfill the requirements in effect during the final session of his attendance at the College.

A student must complete the requirements for a degree within ten semesters of residence in College provided, however, that when a student has been permitted by the Committee on Academic Status to reduce his semester schedule below twelve academic credits, the total period of residence permitted for the completion of the degree requirements shall be extended in proportion to the reduction permitted. In the application of this requirement, attendance in Summer Session will be included. Such attendance will be counted on the basis of the ratio of the Summer Session course load to the normal program of the regular session.

Students requesting exemption from any of the requirements for the degrees of A.B. and B.S. must petition the Committee on Degrees. A student who wishes to initiate a petition should contact the Associate Dean of the Faculty of Arts and Sciences. In exceptional cases, a student, by petition to the Committee on Degrees, may be released from normal requirements and permitted to devise his own program in consultation with his advisor and subject to the approval of the Committee.

B. PROFICIENCIES, AREA REQUIREMENTS, CONCENTRATION

The credits for a degree must be completed in accordance with the following specific requirements.

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

1. Proficiencies

- A. *Foreign Language.* Unless a student presents at least four entrance credits in a single ancient or modern foreign language, or demonstrates proficiency by achieving a score of 600 on the College Board Achievement Test in French, German, Russian or Spanish, or a score of 650 on the Test in Latin, he must satisfactorily complete a fourth semester course (or above) in a language in College.
- B. *Writing:* A student whose combined SAT Verbal and English Achievement scores fall below 1300 must satisfactorily complete a one-semester course in writing, normally during his freshman year, unless (1) he presents at entrance Advanced Placement Test scores of 4 or 5, or (2) applies to take and demonstrates satisfactory performance on a writing test administered at the beginning of the semester in which he enters the College. A student whose combined scores are 1300 or better may take a course in writing but is not required to do so.
- C. *Physical Education:* A student must acquire four semester credits in a physical education program. Each of the four requirements may be satisfied by electing a semester course in an activity offered by the Departments of Physical Education, by participating for a season in a varsity sport, or by passing one of the skills tests offered. It is recommended that a student begin this program in his first semester of residence and continue in the program until the requirements have been satisfied.

2. Area-Sequence Requirements

A student must satisfactorily complete eight courses distributed among the following areas:

Area I. Classical Studies, Comparative Literature, Dance, English, Fine Arts, Modern Languages, Music, Philosophy, Religion, Theatre and Speech.

Area II. Anthropology, Economics, Government, History, Psychology, Sociology.

Area III. Biology, Chemistry, Geology, Mathematics, Physics.

(1) To satisfy the area requirements, each student must take a minimum of two semester courses in a single department within each area. These courses must not be within the department of concentration. They must be courses that are designated for area credit, unless the sequence requirement is also completed in that area.

(2) To satisfy the sequence requirement, each student must take two additional courses outside the area of his concentration. The two courses must be designated for sequence credit. In the area in which the sequence requirement is fulfilled, both the two area courses and the two sequence courses may be selected from those which carry sequence credit. The four courses of the area-sequence requirement must form a logical sequence of introductory and advanced courses or a logical combination of courses on an interdisciplinary topic. Approval for an interdisciplinary sequence must be obtained from the Dean of the Faculty of Arts and Sciences upon the recommendation of the chairmen of the departments concerned.

(3) At least six of the eight required courses should be completed prior to the fourth academic year.

(4) Certain courses offered by a department assigned to one area may be designated by the Educational Policy Committee as suitable for meeting these requirements in another area; but no student may fulfill the area requirements in more than one area with courses offered by the same department.

(5) The semester courses in writing and foreign language courses which are not primarily concerned with the study of the literature or culture in the language do not count toward meeting the area requirements.

(6) In addition to satisfying the Area III requirement by two semesters taken in a science, a candidate for the B.S. degree must take two additional courses in a third science, selected in accordance with the requirements of the department in which the student is concentrating.

(7) For the purpose of meeting the above regulations regarding area requirements,

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

Business Administration subprograms and concentrations in Education and Physical Education are designated as being in Area II.

(8) Courses taken on a Pass/Fail basis may not be used to satisfy proficiency, area-sequence or concentration requirements.

3. Concentration

Before the end of the sophomore year each student shall select either a departmental or an interdisciplinary concentration. A new concentration may not be declared after registration for the second semester of the senior year.

A student may declare two concentrations. For purposes of meeting area and sequence requirements, either concentration may be selected as the primary concentration. Usual rules for area and sequence credit are applied. A course may be counted toward an area or sequence requirement and also toward the second concentration.

A. Departmental concentrations are offered (for the Bachelor of Arts degree) in Anthropology, Classical Studies¹, Economics, Education, English Language and Literature, Fine Arts, Geology, Government, History, Mathematics, Modern Languages and Literatures², Music, Philosophy, Physical Education for Men, Psychology, Religion, Sociology, Theatre and Speech, and (for the Bachelor of Science degree) in Biology, Chemistry, Geology, Mathematics, Physical Education for Men, Physics, and Psychology.

The student in consultation with the chairman of his major department shall select the courses for concentration. A department must require at least twenty-seven semester credits in a single subject field for a concentration but may not require more than forty-two semester credits in all.

When a student decides to concentrate in a subject field in which he has already received credit for an area requirement, that credit shall be counted as part of his concentration and he will have to fulfill the area requirement in another subject field.

No student shall be permitted to apply toward a degree more than forty-eight semester credits in a subject field. The subject fields include: Anthropology, Biology, Chemistry, Economics, Education, English, Fine Arts, French, Geology, German, Government, Greek, History, Latin, Mathematics, Music, Philosophy, Physical Education for Men, Physics, Psychology, Religion, Sociology, Spanish, and Theatre and Speech.

Students in Elementary and Secondary Education may apply thirty-three semester credits and twenty-four semester credits respectively in Education toward the A.B. degree.

B. Interdisciplinary concentrations are supervised by a Committee on Interdisciplinary Studies. Any student may submit a plan for an interdisciplinary concentration for the approval of this committee. Applications are available in the office of the Dean of Students.

ACADEMIC REGULATIONS

COURSE OF STUDY

ACADEMIC ADVISING

Sound academic advising can make the crucial difference between an educational experience that is coherent and exciting, and leads to satisfying personal and professional goals, or one that is fragmented and frustrating to the student. Therefore, students are encouraged to take full advantage of the faculty advising program and to seek out their advisor for academic and other counsel.

Each freshman meets with his advisor before registering for the freshman year to discuss his or her academic and professional goals, to introduce the student to the academic regulations and requirements of the College, and help the student plan a

¹The Department of Classical Studies offers concentration in Greek, Latin, and Classical Civilization.

²The Department of Modern Languages offers concentration in French, German, and Spanish.

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

specific program of studies. If mutually satisfying, freshmen retain the same advisor during the sophomore year. At William and Mary, the student is responsible for meeting his academic goals and it is well for him to take the initiative in making appointments with his advisor to discuss these with him.

Junior and senior students are assigned faculty advisors by the department or school in which they are completing a concentration or sub-program.

STUDENT'S PROGRAM

A full-time degree student must register for at least 12 and not more than 18 credits each semester, excluding required physical education courses. The normal load for a student planning to graduate with a degree in four years is 15 academic credits per semester, or 30 credits each academic year. An academic year is comprised of the first semester plus the second semester but does not include the summer session. Work successfully completed during a summer session is counted toward the 120 academic credits required for graduation, as is the case with transfer credit or advanced placement, but it does not count in the application of continuance standards in any academic year.

Petitions for underloads or overloads, when warranted by special circumstances, may be granted by the Committee on Academic Status; these petitions should be made in writing to the Office of the Dean of Students preferably within a period of 5 days before the first day of registration for the semester in question, but not later than 2 days before the close of the period allowed for course changes without penalty. Only to exceptionally able students, however, will the Committee on Academic Status grant permission to carry more than 18 academic credits.

Courses in Arts and Sciences and in Education may be taken for undergraduate credit on a Pass/Fail basis. This option is limited to one course in each semester of the junior and senior years. A student may arrange with the Office of the Registrar, within the period for course changes, to select a course for Pass/Fail grading during each of those semesters. This option, once exercised, is irrevocable.

CHANGES IN REGISTRATION

For a period of two weeks after the beginning of classes a student may add or drop courses. The procedure for adding and dropping courses is initiated by making application to the Office of the Registrar, and must be completed by the last day of the registration adjustment period. Unless a course change has been made in this manner it has no official standing and will not be recognized as valid by the College. Courses dropped during the adjustment period are not entered on the student's academic record.

A student may add a course after the adjustment period only in the most unusual circumstances. A petition to add a course must have a written recommendation from the student's advisor, as well as the consent of the instructor of the course to be added, before it is considered by the Committee on Academic Status. The procedure for adding courses is initiated by making application to the Office of the Dean of Students, and the advisor's recommendation should be sent directly to that office.

A student may drop a course after the adjustment period under certain specified conditions: a) a student may withdraw from a course regardless of his academic standing in that course during the two weeks following the add-drop period with the grade of W; b) a student may withdraw from a course with the grade of W at any time through the last day of classes if the instructor reports that the student is passing the course at the time of withdrawal. However, in either case the grade of W will be awarded only if the student remains registered for at least 12 academic hours after the course withdrawal and upon official notification to the Office of the Registrar. Exceptions to the foregoing policy may be granted by the Committee on Academic Status. Students are strongly urged to confer with their advisor and with the instructor of any course which they contemplate dropping. A student should inform the instructor of a course which he drops. Any semester in which a student who is pursuing a full-time academic load drops all of his courses after the registration adjustment period for other than medical reasons is

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

designated an "attempted semester" and is counted as one semester for purposes of administering the ten-semester rule for the completion of degree requirements.

CLASS ATTENDANCE

An educational system centered upon classroom instruction is obviously predicated on the concept of regular class attendance. In support of this concept, the following principles are to be observed:

1. Except for reasonable cause, students are expected to be present at all regularly scheduled class meetings, particularly their last scheduled class in each of their courses preceding and their first scheduled class in each of their courses following the Thanksgiving, Christmas, and Spring holidays.

2. Students whose attendance becomes unsatisfactory to the extent that their course performance is affected adversely should be so informed by their instructor and reported to the Office of the Dean of Students.

ACADEMIC STANDING

CLASSIFICATION OF STUDENTS

A sophomore student must have completed at least 24 credits. A junior student must have completed at least 54 credits. A senior student expecting to graduate in June must have completed 85 credits.

CONTINUANCE IN COLLEGE

The standards which are set forth below are considerably less than those which are necessary to insure completion of degree requirements within four academic years.

There is no minimum number of academic credits that a student must earn in each semester, except in the case of a student who is placed on academic probation by the Committee on Academic Status. However, minimal progress and continuance in college require that a student maintain the following schedule of accumulated academic credits (exclusive of work earned during a summer session, through transfer, or through advanced placement): 15 semester credits and 30 quality points at the end of the first academic year, 39 semester credits and 78 quality points at the end of the second academic year, 66 semester credits and 132 quality points at the end of the third academic year, and 93 semester credits and 186 quality points at the end of the fourth academic year.

Students permitted to continue in College on probation and students readmitted to the College on probation are required to meet certain additional standards as established by the Committee on Academic Status. The normal probation period is one academic year. A student who is continuing on probation or who is returning to the College on probation must register for at least 12 academic credits of course work in each semester and must successfully complete all work attempted. A student who is placed on probation and who during this period is permitted to attend summer session must complete successfully all work attempted during the session. In other words, during a period of probation a student is precluded from electing to drop with a designation of F any course for which he registers, and he may not register for less than 12 academic credits. An unclassified student enrolled for 12 or more academic hours must meet the continuance standards applicable to the regularly enrolled student. The record of a student not meeting these standards will be reviewed by the Committee on Academic Status.

WITHDRAWAL FROM COLLEGE

Students who desire to withdraw from College should apply to the Office of the Dean of Students for permission to withdraw. The permanent record card of any student who withdraws from College without permission from the Dean will carry the notation "Withdrew Unofficially."

The Committee on Academic Status reserves the right to determine the status of

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

students who have withdrawn from the College after the add-drop period in either semester.

REINSTATEMENT

Students who are not in good standing with the College but who wish to seek readmission to the College of William and Mary or to transfer to another institution must submit a petition for reinstatement to good standing to the Committee on Academic Status.

Reinstatement to good standing and readmission to the College are not automatic, but at the end of certain specified periods the student is eligible to seek these considerations from the Committee on Academic Status and the Office of Admissions respectively. A student who is asked to withdraw in January for academic deficiency may apply no earlier than April of the same year for reinstatement and for readmission to be effective in September. A student who is asked to withdraw in May or during the Summer Session may apply no earlier than November for reinstatement and for readmission effective in January. Applications should be made well in advance of registration for the fall and spring terms. For information on specific procedures, write to the Committee on Academic Status, Office of the Dean of Students.

ADVANCED PLACEMENT AND CREDIT BY EXAMINATION

Entering students interested in receiving academic credit and/or advanced placement for college level work undertaken before entering William and Mary should take the College Board Advanced Placement Examination. Advanced Placement Examinations may be taken in American history, biology, classical languages, chemistry, English, European history, history of art, mathematics, modern languages, music and physics. These examinations are graded by the College Entrance Examination Board on a 5-point scale.

In the case of the English advanced placement examination, a score of 4 or 5 is routinely awarded three hours of credit equivalent to English 201 and exemption of English 101. In the case of the calculus BC examination, a score of 3 or better is routinely awarded six credits for Mathematics 111 and 112, and a score of 2 is awarded three credits for Mathematics 111. For a score of 4 or better on the calculus AB examination, students are routinely granted six credits for Mathematics 111 and 112, while a score of 3 warrants three credits for Mathematics 111.

Except for English and calculus, advanced placement examinations are reviewed by the faculty in the appropriate department at William and Mary, who, using the content of the College's introductory course as a guide, review the examination and determine whether advance placement and/or academic credit are warranted. Though more time consuming, this process of reviewing the examination on an individual basis protects the entering student from being placed prematurely in an advanced level course. The Department of History reviews all examinations receiving a grade of 4 or better; other departments review examinations receiving 3 or better.

In addition, students at the College may request academic credit for courses by examination. Interested students should petition the Degrees Committee to receive permission to take an examination for credit. If the petition is granted, the department at the College in which the course is normally offered sets an appropriate examination and certifies the results to the registrar.

Students may not receive credit by examination after registration for their final semester, when upper level course work in the same subject has already begun, or when the same course has previously been failed.

William and Mary does not participate in the College Board CLEP program nor in the Subject Standardized Test of the United States Armed Forces Institute.

TRANSFER OF CREDIT FROM OTHER INSTITUTIONS

Transfer credit is granted for any course taken at an accredited college or university in

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

which the student has earned a grade of "C" or better (or, in the case of a course taken on a "Pass/Fail" basis, a grade of "P"), provided that the course is comparable to a course offered for academic credit at the College. A course is deemed comparable to a course offered for academic credit at the College if either (a) the course is similar to a course offered for academic credit at the College, or (b) if it is of such a nature that it would carry academic credit if it were offered by the College. Thus, it is not necessary that a course exactly match, or be similar to a course offered at the College in order to be granted transfer credit. Equivalence transfer credit is granted for courses satisfying condition (a). Elective transfer credit is granted for courses satisfying condition (b). Courses granted elective transfer credit will count toward the total number of academic credits required for the baccalaureate degree, but they may not be used to meet proficiency, area-sequence, or concentration requirements unless approval has been granted by the College's Committee on Degrees.

Transfer credit will not be granted for courses which belong in one or more of the following categories: (a) courses in professional, vocational or sectarian religious study, (b) courses below the level of introductory courses at the College, (c) freshman English courses of more than one semester which are devoted primarily to writing or composition, (d) applied music courses not accompanied or preceded by courses in music theory, (e) college orientation courses. The College does not grant credit for attendance in service schools or training programs in the Armed Forces unless it can be demonstrated that such attendance is the equivalent of a course or courses offered at William and Mary. Academic courses taken while on military service at accredited colleges, universities or language institutes may be transferred in the normal manner. No credit will be granted for general military training, or for work done while a student is not in good standing.

College credit earned while a student is still in high school may be transferred to William and Mary provided that the courses were not used to satisfy high school graduation requirements.

Evaluations of credits earned from other institutions are made after a student has been selected for admission and has indicated an intention to enroll. No student may assume that credit will be given for work at other institutions until he has a written statement as to what credit will be accepted. Each transfer credit reduces the College requirement by one credit and two quality points. Transfer grades do not affect degree requirements, quality point averages, or class rank. While there is no limit to the number of courses which may be transferred, William and Mary requires that at least sixty semester credits be earned in residence at the College in Williamsburg.

Any student of the College who proposes to attend a summer session elsewhere must have written permission in advance from the chairman of the Committee on Degrees in order to insure that credit will be transferred. After a student enrolls at the College, courses taken in a summer session elsewhere may not be used to satisfy proficiency, area-sequence, or concentration requirements.

The policy of the School of Business Administration is to grant transfer credit for business administration courses which are equivalent to courses offered in the School of Business Administration. No transfer credit is granted for courses not offered by the School of Business Administration.

EVALUATION OF STUDENTS

SYSTEM OF GRADING

Completed academic work is graded A, B, C, D or F, unless it is taken on a Pass/Fail basis. These grades have the following meanings: A—excellent, B—good, C—satisfactory, D—minimal pass, F—failure. For each semester credit in a course in which a student is graded A, he receives 4 quality points; B, 3; C, 2; D, 1. F carries no credit and no quality points. Courses taken on a Pass/Fail basis and work in required Physical Education are graded P (pass) or F (failure).

In addition to the grades A, B, C, D, and F, the symbols "W," "G," and "I" are used on

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

grade reports and in the College records. "W" indicates: a) a student's withdrawal from a course, regardless of his academic standing, during the two weeks following the add-drop period, and b) a student's withdrawal from a course at any time through the last day of classes if the instructor reports that the student is passing the course at the time of withdrawal. In either case, the "W" would be given only if the student remains registered for at least 12 academic hours after the course withdrawal. Exceptions to the foregoing policy may be granted by the Committee on Academic Status.

"I" indicates that an individual student has not completed essential course work because of illness or other extenuating circumstances. This includes absence from the final examination and postponement of required work with approval of the instructor. An extension may be granted for one semester if the instructor concludes that there are unusual reasons which prevent the student from completing the assigned work. "I" automatically becomes "F" if the work is not completed; this occurs at the end of the semester following the course if no extension is given, or at the end of an additional semester if an extension is given.

"G" indicates that the instructor has deferred reporting the student's grade since there is not sufficient evidence on which to base a grade.

EXAMINATIONS

The examinations, given at the end of each semester, take place at the times announced on the examination schedule, which is coordinated by the Dean of the Faculty of Arts and Sciences and attached to the class schedule. Students are required to take all of their examinations at the time scheduled, unless excused on account of illness or other sufficient reasons by the Office of the Dean of Students. Students should present their reasons for an expected absence to the dean in advance of the examination. No excuse on the ground of illness will be accepted unless it is approved by the College physician.

Deferred examinations are authorized by the Dean of the Faculty of Arts and Sciences for students who have been excused by the Office of the Dean of Students from taking their examinations at the regular time. Members of the faculty are not authorized to grant deferred examinations. The deferred examinations are given early in the following semester.

Except under very exceptional circumstances students are not permitted to postpone the taking of a deferred examination beyond the first occasion thus regularly provided; and in no case will permission to take a deferred examination be extended beyond a year from the time of the original examination from which the student was absent. The schedule of the deferred examinations, coordinated by the Dean of the Faculty of Arts and Sciences, will be mailed to each student who is entitled to take a deferred examination.

The College does not authorize re-examinations.

SPECIAL PROGRAMS

HONORS PROGRAMS

The Honors Programs provide special opportunities through independent study for the intellectual stimulation and development of superior students in certain departments and interdisciplinary studies. Departments participating in the program are Biology, Chemistry, Classical Studies, Economics, English, Fine Arts, Geology, Government, History, Modern Languages, Philosophy, Physics, Psychology, Religion, and Sociology.¹ Students in this program may, as the result of distinguished work, be awarded a degree with "Honors," "High Honors," or "Highest Honors."

¹For more detailed statements of departmental requirements, consult catalog entries by department and also separate instructions issued by each department.

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

- I. *Eligibility, Admission and Continuance in the Program*
 - A. Eligibility is contingent upon (1) a 3.0 cumulative quality point average, or (2) a 3.0 quality point average for the junior year alone, or (3) special permission of the Committee on Honors and Experimental programs, which will consider appeals only when initiated by the Department as well as by the student in question.
 - B. A student who wishes to pursue honors work and who has good reason to believe that he will qualify under paragraph "A" above should declare his interest as early as possible to the Chairman of his Department. Such declaration should be made in the spring semester of his sophomore year when he declares his field of concentration but may be made as late as the last semester of his junior year. Application for admission to honors must be made in the last semester of the junior year. A student will be admitted to candidacy when (1) his eligibility is certified by the Dean of the Faculty of Arts and Sciences; (2) his written thesis or project proposals is accepted by a Departmental Committee preferably by the last semester of his junior year and no later than the end of the add-drop period during registration for the first semester of his senior year; (3) his candidacy is accepted by a Departmental Committee subject to considerations of teaching staff availability.
 - C. The continuance of a student in the Honors Program is contingent on his maintaining what his major department judges to be a sufficiently high standard of work.
- II. *Minimum Requirements for a Degree with Honors*
 - A. Satisfactory completion of a program of reading and research supervised by a faculty member designated by the head of the student's major department. Six hours of credit in a course designated 495-496 in each department offering Honors shall be awarded each student satisfactorily completing the program.
 - B. Satisfactory completion of the general requirements for the degree of A.B. or B.S.
 - C. Presentation of an Honors Essay or completion of an Honors Thesis acceptable to the major department. This requirement must be met by April 15 of the student's senior year.
 - D. Satisfactory performance in a comprehensive examination on the thesis and related background. The examination may be oral or written or both.
- III. *Examining committee*
 - A. Each comprehensive examination shall be set and judged and each Honors Essay or Project shall be judged by an examining committee of not less than three members, including at least one member of the faculty of the candidate's major department and at least one faculty member from another department.
 - B. Examining Committees shall be appointed by the Dean of the Faculty of Arts and Sciences during the first month of the candidates' final semester.
- IV. *Standards*
 - A. The award of "Honors," "High Honors," or "Highest Honors" shall be determined by the student's examining committee.
 - B. The committee shall take into account the recommendation of the advisor as well as its own judgment of the examination and essay or project.
 - C. When a student's work does not, in the opinion of the Committee, meet the minimum requirements for honors, the faculty members supervising the student's Honors work will determine what grade should be granted. A student may be dropped from honors work at the end of the first semester.

PROJECT PLUS: AN ACADEMIC AND RESIDENTIAL PROGRAM

Project PLUS is an enterprise that combines a study program with special living arrangements. It is made up of 84 sophomores, juniors and seniors who live in the PLUS

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

residence hall and who enroll for part of their academic work in special courses taught by faculty in the residence hall itself. All course work in the Project centers on a common theme. Objectives of the Project are: (1) to integrate in-class and out-of-class activity; (2) to offer more opportunity for experimentation in teaching and course design; (3) to encourage interdisciplinary study. By virtue of his enrollment in one tutorial and in the forum each student earns four hours of elective credit each semester graded on a Pass/Fail basis.¹

STUDY ABROAD

The College encourages students to supplement a liberal arts program through study abroad. A junior year abroad program is available at the University of Montpellier in France. A summer foreign study program is held at Christ's College, Cambridge University in England. Each year several students are selected to participate in programs at Exeter and St. Andrews Universities in the United Kingdom, and the University of Muenster in Germany. Other students, in consultation with the Associate Dean of the Faculty of Arts and Sciences, work out individual programs of study at foreign institutions. Normally the maximum number of transfer credits awarded is 15 credits per semester.

PRE-PROFESSIONAL PROGRAMS

Students may follow programs at William and Mary within a liberal arts framework which will prepare them for study in dentistry, engineering, forestry, medical technology, medicine, and veterinary medicine. Students who are interested in pre-professional programs should plan their programs in consultation with their advisors.

PRE-MEDICAL AND PRE-DENTAL PROGRAMS

There are no specific pre-medical or pre-dental programs at William and Mary. Students preparing for admission to medical or dental school may choose to concentrate in any department. Although medical and dental schools in general have no preference as to major field of undergraduate study, they do believe that the student should pursue a coherent program with some depth.

The foundation of medicine and dentistry is the natural sciences. All medical schools and most dental schools include in their admission requirements four laboratory science courses: biology, inorganic chemistry, organic chemistry, and general physics. The calculus is rapidly assuming the same importance. At William and Mary, the above courses are Biology 101-102, Chemistry 103-206, Chemistry 307,308, Physics 101-102, and Mathematics 111-112. Science courses in addition to these minimal requirements are required by some schools and viewed with favor by many others. In any case, the student's choice of courses should be balanced and should reflect his overall intellectual development.

Since medical schools begin to reach decisions on applicants for admission early in the senior year on the basis of records established at that time, it is advantageous that the minimal required science courses be completed in the first three years. Every pre-medical student is encouraged to seek academic guidance early in his career through scheduled consultations with Dr. Randolph Coleman in the Chemistry Department or Dr. Mitchell Byrd in the Biology Department, coordinators for pre-medical advising, and with the student's concentration advisor.

COMBINED PLANS WITH ENGINEERING SCHOOLS

Engineering schools are searching for students with the appropriate background from liberal arts colleges. William and Mary has "combined plans" with the engineering schools of Columbia University, Rensselaer Polytechnic Institute, and Washington

¹For further information, see page 144.

REQUIREMENTS FOR DEGREES AND ACADEMIC REGULATIONS

University in St. Louis. The "3-2 plan" leads, after three years at William and Mary and two years at the engineering school, to a bachelor's degree from both institutions. The "4-2 plan" substitutes four years at William and Mary and a masters degree from the engineering school. For details, consult Prof. Hans C. von Baeyer, chairman of the Department of Physics. Academic programs of those who participate in the combined plan must be approved by the Committee on Degrees.

FORESTRY

The College offers a special program in cooperation with the School of Forestry of Duke University. Upon completion of a five-year coordinated course of study, the student will have earned the Bachelor of Science degree from William and Mary and the professional degree of Master of Forestry from Duke University. The student devotes the last two years of his program to the professional forestry curriculum of his choice at Duke, where forestry courses are open only to seniors and to graduate students. Information about curriculum planning for entry into the program with Duke is available through consultation with Dr. Martin C. Mathes, Professor of Biology.



Earl Gregg Swem Library

VI. FIELDS OF CONCENTRATION, SUBPROGRAMS, AND COURSE DESCRIPTIONS

THE chapters in this section describe, in alphabetical order, the requirements for concentration in the various fields and subprograms offered by the College according to the departments and schools offering them. The chapters also include the undergraduate course offerings of the departments, schools, and particular programs listed according to course number. Courses that satisfy proficiency requirements are so designated and courses that can be taken to fulfill area and sequence requirements are indicated by symbols as described below.

Also described in the chapters are the requirements for departmental honors study, when that is provided.

EXPLANATION OF COURSE DESCRIPTIONS

(A) This course satisfied area requirements.

(S) This course satisfies sequence requirements.

(AS) This course satisfies area and sequence requirements.

(*) Starred courses may be taken only with the consent of the instructor.

(‡) Daggered courses may be taken only with the consent of the head of the department or dean of the school concerned.

Pairs of numbers (201, 202) indicate continuous courses. A hyphen between numbers (101-102) indicates that the courses must be taken in the succession stated.

Courses involving laboratory or studio activity are so labeled. All others are classroom courses.

Semester hour credit for each course is indicated by numbers in parentheses.



FACULTY OF ARTS AND SCIENCES

DEPARTMENTS OF INSTRUCTION

Anthropology

ASSOCIATE PROFESSOR SUTLIVE (Chairman). PROFESSORS ALTSHULER, DEETZ,¹ and ZAMORA. ASSOCIATE PROFESSORS BALLINGALL, BARKA, and REINHART. ASSISTANT PROFESSORS BRUSH² and NOISIN. LECTURERS, KELSO³, KERNS³, and SOUTHARD.

The department offers work in all sub-fields of anthropology and all major geographic areas. Field and laboratory training in archaeology, physical anthropology, and ethnography is provided in a variety of courses, as well as through individual research at the senior level. In conjunction with other departments and schools within the College, the department is developing programs in tropical studies, anthropology and education, historical archaeology, and comparative colonial studies. Under the auspices of Southside Historical Sites Foundation and other agencies, the department conducts research at prehistoric and historical sites.

REQUIREMENTS FOR CONCENTRATION

Concentration in Anthropology requires 33 semester credits in anthropology, including Anthropology 201, 202, 301, 302, 400 or 410, and 401.

DESCRIPTION OF COURSES⁴

201. Human Origins. (A) Fall (3) Staff.

A general introduction to the study of human origins and the development of culture. Particular attention will be given to recent archaeological discoveries concerning the evolution of the Primate Order, the development of agriculture, and the beginnings of civilization.

202. Cultural Anthropology. (A) Spring (3) Staff.

The application of the concept of culture to the study of contemporary societies, both primitive and modern. Such institutional areas as magic and ritual; crime, custom, and law; economy; and courtship, marriage and childrearing will be analyzed cross-culturally.

301. Methods in Archaeology. Fall (3) Mr. Barka and Mr. Reinhart.

A general introduction to field and laboratory techniques of prehistoric and historic archaeological research.

302. Methods in Ethnography. Spring (3) Staff.

An introduction to field study including the collection and interpretation of data. The course will also include a review of techniques developed by ethnographers for the study of living communities.

304. Primitive Economic Systems. (S) (Not offered 1977-78) (3) Mr. Brush.

A study of representative economic systems of both prehistoric and modern non-industrial cultures. The course explores the evolution of technology and subsistence techniques, the development of the market system, and the interrelationship of economic organization and other aspects of culture.

¹Eminent Scholar, 1977-78.

²On leave, 1977-78.

³Visiting, 1977-78.

⁴Course work at the 100 or 200 level is ordinarily a prerequisite for upper level courses.

ANTHROPOLOGY

305. Peasant Societies. (S) (Not offered 1977-78) (3) Mr. Brush.

This course will explore the nature of peasants and their place in modern societies. The rise of peasants in western and nonwestern societies will be analyzed. Problems which confront many third world nations such as agrarian reform, peasant revolutions, and economic development will be discussed.

306. The Descent of Woman. (S) Spring (3) Ms. Ballingall.

Field and laboratory studies of non-human primates as well as human cross-cultural data will be examined in order to focus on the condition of women in several societies including modern U.S.A.

307. Social Anthropology. (S) Fall (3) Mr. Zamora

An introduction to the study of the major social features of non-industrial peoples from a functional point of view. Topics considered are: incest and exogamy, marriage, the family, kinship, descent and descent groups, age and sex as associations stratification.

308. Primitive Religion. (S) Fall (3) Mr. Sutlive.

This course will examine the religious systems of primitive societies. Topics to be considered include myth and ritual, sorcery and witchcraft, nativistic movements, magic, and shamanism. The course will also examine the effects of modernization on primitive belief systems.

309. Physical Anthropology. (S) Spring (3) Ms. Ballingall.

An examination of the evolution of the hominids and of the relations between them and the forms closest to them, the Primates. Attention will be given to fossil forms and to fossil and living populations.

311. Archaeology of North America. (S) Fall (3) Mr. Reinhart.

An introduction to the prehistory of North America north of Mexico from the earliest peopling to the historic period. The dynamics of culture development and the relation of prehistoric cultures to historic tribes will be analyzed.

314. Indians of North America. (S) Spring (3) Mr. Reinhart.

A survey of the major culture areas of aboriginal North America north of Mexico at the time of European contact. The post-contact relations between the Native Americans and the dominant White culture and the present-day situation and problems of Native Americans will be examined.

321. Archaeology of Mesoamerica. (S) Spring (3) Mr. Reinhart.

An introduction to the prehistory of Mesoamerica with special attention to the development of Aztec and Maya civilization.

323. Native Cultures of South America. (S) (Not offered 1977-78) (3) Mr. Brush.

A descriptive survey of native and preHispanic peoples and cultures of South America. The course will focus on the tribal cultures of the Amazon Basin and the rise of indigenous civilizations such as the Inca.

324. Contemporary Peoples and Cultures of South America. (S) (Not offered 1977-78) (3) Mr. Brush.

A descriptive survey of postConquest peoples and cultures of South America. Peasant and urban cultures of the continent will be examined with particular attention given to social distinctions based upon class, ethnicity, race, language, land tenure and religion.

330. Peoples and Cultures of the Caribbean. (S) Fall (3) Ms. Kerns.

An introduction to the peoples and cultures of the Caribbean with particular attention given to social distinctions based upon class, ethnicity, race, language, land tenure, and religion.

ANTHROPOLOGY

331. Peoples and Cultures of Africa. (S) Fall (3) Mr. Noisin.

An introduction to peoples and cultures of Africa. The ideological, social, political, and economic aspects of representative cultures are examined. Emphasis is placed on learning how to apply information gathered from particular African peoples to problems of general interest in the social sciences.

340. Peoples and Cultures of Insular Southeast Asia. (S) Fall (3) Mr. Sutlive.

A descriptive survey of the ethnic groups of Insular Southeast Asia, analyzed in terms of ecology, social structure, technology, and cultural pattern. The course concerns itself with insular southeast Asia of the ethnographic present and the present day.

342. Peoples and Cultures of Mainland Southeast Asia. (S) Spring (3) Mr. Sutlive.

A descriptive survey of the major ethnic groups of Mainland Southeast Asia, analyzed in terms of ecology, language, social structure, and cultural configuration. The course concerns itself with southeast Asia in the ethnographic present and the present day.

344. Peoples and Cultures of Oceania. (S) Spring (3) Ms. Ballingall.

A descriptive survey of the Pacific Island World, including Aboriginal Australia, analyzed in terms of such variables as social organizations, cultural pattern, and culture contact.

346. Peoples and Cultures of South Asia. (S) Spring (3) Mr. Zamora.

A descriptive survey of the ethnic groups of the sub-continent of India and Ceylon. These societies and cultures will be analyzed in terms of ecology, social structure, value systems, and demography.

352. Archaeology of Europe. (S) Spring (3) Mr. Barka.

A survey of the prehistoric and early historic cultures of Europe, covering the Paleolithic, Neolithic, Bronze, and early Iron Ages. Comparisons will be made with the cultural development of Asia, the Middle East, and Africa.

362. Personality in Culture. (S) Fall (3) Mr. Altshuler.

The relationship of culture and personality as viewed by scholars in psychology, sociology, philosophy and anthropology will be examined.

363. Cultural Patterns and Technological Change. (S) Fall (3) Ms. Ballingall.

An examination of the role of cultural practices and interdependent cognitive frameworks which facilitate or impede modernization of societies now encompassed within so-called underdeveloped areas. Case studies by anthropologists from a variety of cultures will be presented.

364. Tropical Ecology. (S) Fall (3) Mr. Sutlive (Not offered 1977-78)

A survey of the tropical world, its distinctive features and constituents, resources, human responses, and problems of development.

366. Culture and Tradition in Pre-Colonial Africa. (S) Fall (3) Mr. Noisin.

A survey of the development of African culture from the rise of the great Sudanic Kingdoms until the partition of Africa by the European powers following the Berlin conference of 1884-85.

400. Anthropological Theory. Fall (3) Mr. Altshuler.

A seminar for senior concentrators in anthropology which deals with theories concerning the relationship of man, society and culture presented by anthropology and related disciplines.

401-402. Anthropological Research. Fall and Spring (3,3) Staff.

Under the direction of a faculty advisor each student will be required to complete a

ANTHROPOLOGY

senior research project. In addition to the required three hours (401), students may elect to continue for an additional three hours (402).

410. History of Anthropology. (S) Spring (3) Mr. Sutlive.

The course will cover the development of the field of anthropology in the 19th and 20th centuries. The student will read original works by major contributors to anthropological literature such as Morgan, Tylor, Kroeber, and Levi-Strauss.

417. Special Topics in Anthropology.

Anthropology and Education. (S) Fall and Spring (3,3) Mr. Noisin.

Applied Anthropology. (S) Fall (3) Mr. Altshuler.

Anthropology and Contemporary Issues. (S) Fall (3) Mr. Zamora.

Biological Anthropological (Hominids). (S) Fall (3) Ms. Ballingall.

American Material Culture. (S) Fall (3) Mr. Deetz.

Public Archeology. (S) Fall (3) Mr. Kelso.

Anthropology of Law, Politics and Diplomacy. (S) Fall (3) Mr. Zamora.

430. Descriptive Linguistics. (S) Fall (3) Mr. Southard (Same as English 405).

A study of contemporary linguistic theory and some practical methods of language analysis, including a comparison of the structures of diverse languages.

432. Historical Archaeology. (S) Spring (3) Mr. Barka.

The archaeology of the era since the beginning of the exploration of Europeans of the non-European world, with major emphasis upon North America. Artifacts of the period will be examined with a view toward reconstructing the daily life of the people.

440. Introduction to Historical Linguistics. (S) Spring (3) Mr. Southard (Same as English 406).

This course surveys the major results of Indo-European Historical Reconstruction. Some consideration is given to the contributions of recent Generative Phonology and Indo-European. The course also includes some investigations into non-Indo-European Reconstruction.

450. Anthropology and Medicine. (S) Spring (3) Mr. Altshuler.

The medical system of the United States will provide the basic unit of comparison for a review of the ways in which different societies cope with problems of ill-health. The focus will be upon cultural variation in definitions of "illness" and "therapy" and the manner in which such definitions and practices are interrelated with other aspects of culture.

SUMMER FIELD SCHOOL IN ARCHAEOLOGY

The Department of Anthropology, in cooperation with Southside Historical Sites, Inc., will offer a Summer Field School (in both prehistoric and historical archaeology) at Flowerdew Hundred on the James River. Students accepted for the Field School will take one of two courses during the six-week period. These courses are:

Anthropology 225: An introduction to archaeological field and laboratory methods through participation in a field archaeological project. Archaeological survey and recording, artifact processing and analysis, and related topics will be covered in field and laboratory work and in lectures. No prerequisites. 6 credits.

Anthropology 425: The application of archaeological methods to an individual field project. The course will allow advanced students to work on an individual project within the framework of a supervised archaeological field program. Prerequisites: Anthropology 301 or equivalent and field experience, or by permission of instructor. 6 credits.

Biology

ASSOCIATE PROFESSOR WARE (Chairman), PROFESSORS ACETO, BLACK, BROOKS, BYRD¹, COURSEN, MANGUM, MATHES AND TERMAN. ASSOCIATE PROFESSORS BRADLEY, GRANT, HALL, SCOTT, VERMEULEN and WISEMAN. ASSISTANT PROFESSORS BECK, CAPELLI, FASHING and HOEGERMAN.

The program of the Department of Biology is organized to provide concentrators with a sound introduction to the principles of biology and develop an appreciation for the diversity and complexity of living things. The Department attempts to provide concentrators both breadth and depth of training as well as a variety of approaches to the study of life, while allowing maximum flexibility in the development of programs consistent with the interests and need of individual students. The Concentration requirements below have been designed with these objectives in mind.

REQUIREMENTS FOR CONCENTRATION

A minimum of 38 credits is required for concentration in Biology. A maximum of 8 of these credits (which may include Chemistry 201, 202 or 203, 204) may be approved in other departments for courses above the 100 level completed with a minimum grade of "C". In addition to Biology 101, 102, a concentrator must take one course from each of the following five groups of courses. Some courses (marked with an asterisk) occur in two groups, but in such cases a single course may satisfy the requirement in only one group, and another course must be chosen from the second group. At least one course must be primarily zoological and at least one must be primarily botanical (those marked Z and B respectively). At least four courses above the 100 level must include laboratory work in addition to the lecture-discussion periods. Biology 417 may not be used to fulfill the laboratory requirement.

- A. (*Biology of Organisms*): 201(Z); 209(B); 315(Z); *316(Z); 412(B); *416(Z); *428(Z).
- B. (*Environment Biology*): 311; *314; *316(Z); 410(Z); *416(Z); 426; *428(Z).
- C. (*Genetics and Evolution*): 302; *314.
- D. (*Developmental and Cell Biology*): 202(Z); 204(B); 301; 320(B); *405; 422.
- E. (*Physiology and Biochemistry*): *405; 408(Z); 414; 419(B).

Chemistry 203 and 204 are required for concentration in Biology and are included in the calculation of the quality point average in the concentration. It is strongly recommended that Biology concentrators complete two semesters in both mathematics and physics. Students who intend to pursue graduate work in biology should take a modern foreign language (German, French, or Russian) through 202.

DESCRIPTION OF COURSES

101-102. Introductory Biology. (A) Fall and Spring (4, 4) Ms. Beck, Mr. Hoegerman, Mr. Scott and Mr. Mathes, Fall Semester. Ms. Beck, Mr. Brooks, Mr. Fashing and Mr. Mathes, Spring Semester.

Concepts of modern biology based on molecular and cellular structure; a brief survey of the plant and animal kingdoms relating morphology to physiology; discussions on ecology, organic evolution, and the relation between biological problems and human society. *Three Class Hours, Three Laboratory Hours.*

201. Comparative Anatomy of Vertebrates. (S) Fall (4) Mr. Byrd. Prerequisite: Biology 102.

Consideration of the evolution of the larger taxonomic groups of chordates with a comparative study of their gross morphology. *Three Class Hours, Six Laboratory Hours.*

202. Principles of Animal Development. (S) Spring (3). Mr. Wiseman. Prerequisite: Biology 102.

¹On leave, second semester.

BIOLOGY

An investigation of major events and processes of animal development. Topics include fertilization and early development, nuclear-cytoplasmic interaction, cell determination and differentiation, morphogenetic processes, growth, developmental neurobiology, neoplasia, aging, and genetic control of development.

203. Animal Development Laboratory. Spring (1) Mr. Wiseman. Prerequisite or Corequisite: *Biology 202*.

A laboratory course primarily intended for students interested in experimental approaches to embryology. Development of, and experimentation upon, amphibian and chick embryos will be emphasized. Three Laboratory Hours.

204. Principles of Plant Development. (S) Fall (3) Mr. Mathes. Prerequisite: *Biology 101, 102*.

Discussion of cell growth, auxin balance, nutrition, and cell division as factors which contribute to the determination of developmental pathways in plants.

205. Plant Development Laboratory. Fall (1) Mr. Mathes. Prerequisite or Corequisite: *Biology 204*.

Designed to supplement and complement the materials presented in *Biology 204*. Emphasis is placed on demonstrations involving plant structure and development. Plant diversity (field trip), seeds and germination, stems, roots, leaves and water, plant reproduction, light and plant development, and hormones in plant growth are investigated. Three Laboratory Hours.

209. Anatomy of Land Plants. (S) Fall (4) Mr. Hall. Prerequisite: *Biology 101*.

A systematic survey of the major cell, tissue and organ types of the bryophytes, pteridophytes, gymnosperms and angiosperms. Taxonomy, life-cycles, paleobotany and evolutionary history of each group are discussed. Three Class Hours, Six Laboratory Hours. (Alternate years; not offered 1977-78)

301. Microbiology. (S) Fall (4) Mr. Vermeulen. Prerequisite: *Biology 101*.

Homologies are stressed in the study of life using the elementary systems of selected bacteria and other microorganisms. With the ultimate goal of an understanding of current research, the areas covered include classical and modern techniques, biochemistry, sexual and asexual genetics. Two Class Hours, Eight Laboratory Hours.

302. Genetics. (S) Fall and Spring (3) Mr. Grant, Fall Semester. Mr. Hoegerman, Spring Semester. Prerequisite: *Biology 101, 102*. Introductory Chemistry and mathematics are recommended.

A comprehensive survey of genetics as a field of science. The course includes three broad areas: classical mendelism; gene structure and function; and population genetics.

303. Genetics Laboratory. Fall and Spring (1) Mr. Grant, Fall Semester. Mr. Hoegerman, Spring Semester. Prerequisite or Corequisite: *Biology 302*.

A laboratory course designed for students intending to pursue advanced studies in biology. Topics include cytogenetics, classical genetics and population genetics. The handling of living material is emphasized through experimental work with *Drosophila*, flowering plants and microbes. Three Laboratory Hours.

307. Human Physiology. Spring (3) Staff. Prerequisites: *Biology 101, 102* are suggested.

Detailed study of the manner in which different organ systems of the human body function. An elective course not applicable towards the minimum requirements for concentration in Biology. Two Class Hours, Three Laboratory Hours.

308. Human Anatomy. Fall (3) Staff.

Gross and histological study of the human organism with particular emphasis on the

BIOLOGY

neuro-muscular systems as related to physical and health education. An elective course not applicable towards the minimum requirements for concentration in Biology. *Two Class Hours, Three Laboratory Hours.*

311. General Ecology. (S) *Fall and Spring* (4) Mr. Ware, Fall semester; Mr. Capelli, Spring semester. *Prerequisites: Biology 101, 102; one other course in biology recommended.*

Discussion of interactions between organisms and their environment; factors controlling structure, and distribution of populations, communities, and ecosystems. *Three Class Hours, Three Laboratory Hours.*

314. Biological Evolution. (S) *Spring* (3) Mr. Grant. *Prerequisites: Biology 101, 102. Introductory Mathematics and Genetics should prove helpful.*

The course is designed to consider evolution as a process: basic population genetic theory; sources of variation; natural selection; isolating mechanisms and speciation.

315. Vertebrate Biology. (S) *Fall* (4) Mr. Brooks.

A study of the ecology, taxonomy, behavior and physiological ecology of vertebrates, with special emphasis on the lower vertebrates. *Three Class Hours, Four Laboratory Hours.*

316. Invertebrate Biology. (S) *Fall* (4) Ms. Mangum.

Ecology, taxonomy, morphology, physiology and behavior of invertebrate organisms. Phylogenetic relationships are emphasized. *Three Class Hours, Six Laboratory Hours.*

320. Fundamentals of Mycology. (S) *Spring* (3) Mr. Coursen. *Prerequisites: Biology 101; knowledge of chemistry recommended.*

Designed to consider the general features common to most fungi by expounding on the broad trends in structure, function, and behavior which can be discerned in the group. Selected model systems which illustrate these features at the subcellular, cellular, and organismal level are examined.

321. Mycology Laboratory. *Spring* (1) Mr. Coursen. *Prerequisite or Corequisite: Biology 320.*

A laboratory course designed for students interested in broadening their botanical knowledge and acquiring laboratory skills needed to understand and investigate fundamental processes in fungi. Students will conduct a small, independent experimental problem in the latter part of the semester. *Three Laboratory Hours.*

***403. Problems in Biology.** *Fall and Spring* (Credit to be arranged). Staff. Supervised projects selected to suit the needs of the individual student. Students may not apply more than three hours of Biology 403 toward a concentration in Biology. *Hours to be arranged.*

404. Topics in Biology. *Fall and Spring* (2-4 credits to be arranged) Staff. *Prerequisites: Biology 101, 102.*

Areas of special current research interest presented by resident and visiting faculty members as opportunity and demand arise. *Hours to be arranged.*

405. Cellular Physiology. (S) *Fall* (4) Mr. Black. *Prerequisites: Biology 101, 102; Chemistry 203, 204.*

The relationships between submicroscopic anatomy and chemistry of the cells are explored. Experiments dealing with cell-chemistry, permeability, metabolism, and growth are performed. *Three Class Hours, Four Laboratory Hours.*

408. Mammalian Physiology. (S) *Fall* (4) Mr. Bradley. *Prerequisites: Biology 101, 102 and Chemistry 203, 204; Physics 101, 102 recommended.*

The function of the animal as a whole as indicated by the physiology and interrelationships of different organs and organ systems. *Three Class Hours, Four Laboratory Hours.*

BIOLOGY

409. Virology. (S) Spring (3) Mr. Vermeulen. Prerequisite: *Biology 301, 405 or 414.*

The mechanisms of infection and replication of selected animal, plant and bacterial viruses are discussed with special attention being directed at the type of genetic material involved—DNA or RNA. Virally induced tumors and cancers are discussed at some length. Alternate years; not offered 1977-78.

410. Animal Behavior. (S) Fall (3) Mr. Terman. Prerequisites: *Biology 101, 102 and two other courses in biology. Psychology 201, 202 recommended.*

Description of the known behavior patterns of selected invertebrate and vertebrate groups with emphasis on adaptive significance. The genetics, ontogeny and ecological significance of behavior patterns will be presented where known.

412. Biology of the Vascular Plant. (S) Spring (4) Mr. Hall.

A study of the major families of vascular plants, emphasizing comparative morphology and evolutionary trends, ecological relationships, economic importance, classification and research methods. *Three Class Hours, Six Laboratory Hours.*

414. Biochemistry. Spring (3) Mr. Vermeulen. Prerequisites: *Mathematics 103, Chemistry 203, 204 or permission of instructor.*

A study of the molecular basis of living processes: The chemistry of the important constituents of living matter; energy metabolism; enzyme kinetics; thermodynamics; biosynthesis; metabolic control.

415. General Endocrinology. (S) Spring (4) Mr. Bradley. Prerequisites: *Biology 101, 102; 408 recommended.*

The role of hormones in the maintenance of homeostasis, control of metabolic processes, and reproduction as exemplified by mammals. This course is intended as an introductory course and is a prerequisite for Experimental Endocrinology. *Three Class Hours, Four Laboratory Hours.*

416. Introduction to Ornithology. (S) Spring (4) Mr. Byrd. Prerequisite: *Biology 102.*

Introduction to the biology of birds; lecture and laboratory work on morphology, classification, migration, distribution, and breeding biology; field work on identification and general ecology. *Three Class Hours; Eight Laboratory Hours.*

417. Biostatistics. Spring (4) Mr. Fashing. Prerequisites: *At least two courses at the 300 level or above in Biology.*

An introduction to the mathematical and statistical techniques available to analyze and to interpret the results of experiments in both a qualitative and quantitative manner. The emphasis will be placed on the applications of quantitative techniques in biological research. *Three Class Hours, Three Laboratory Hours.*

418. Experimental Biochemistry I. Spring (2) Mr. Vermeulen. Prerequisite or corequisite: *Biology 414 or 405 or Chemistry 204 or consent of the instructor.*

An introduction to experimentation with biochemical systems, processes, and compounds of biochemical importance; identification and quantitative measurements of such constituents and of biological transformations. *Six Laboratory Hours.* Alternate years; not offered 1978-79.

419. Plant Physiology. (S) Spring (4) Mr. Mathes. Prerequisites: *Biology 101, 102; Recommended: Chemistry 203, 204.*

Mechanisms of absorption, translocation, synthesis and utilization of materials. The role of internal and external factors in plant growth. *Three Class Hours, Four Laboratory Hours.*

422. Cell Structure and Function. (S) Spring (3) Mr. Scott. Prerequisites: *Biology 101, 102; Chemistry 203 recommended.*

BIOLOGY

An introduction to the ultrastructure of cells and organelles. Included are such topics as principles of light and electron microscopy, eucaryotic cell organelle structure and function, cell division in procaryotes and eucaryotes, and patterns of cell differentiation at the subcellular level.

423. Cell Structure and Function Laboratory. Spring (1) Mr. Scott. Prerequisite or Corequisite: *Biology 422*.

An introduction to basic light microscopic techniques and histological procedures. Bright-field, phase, dark-field and interference optics are taught and/or demonstrated along with a brief introduction to electron microscopy. Cell types representative of different phylogenetic groups will be examined and several experiments will be performed. *Three Laboratory Hours*.

424. Introduction to Radiation Biology. Fall (3) Mr. Aceto. Prerequisites: *Biology 101-102; Physics 101-102 or 103-104*.

A study of the biological effects of radiation. Interaction of radiation with matter, basic mechanisms of radiation injury, biological manifestations of radiation damage.

426. Aquatic Ecology. (S) Fall (4) Mr. Capelli. Prerequisites: *Biology 311* or consent of the instructor.

Introduction to the ecology of natural waters; discussion of the important physical and chemical characteristics of aquatic environments and the adaptations of organisms living in water; community structure and the important processes affecting it, including major aspects of water pollution. *Three Class Hours, Four Laboratory Hours*.

428. General Entomology. Fall (4) Mr. Fashing.

An introduction to the biology of insects designed to give the student an overview of entomology. Included are such topics as classification, morphology, physiology, behavior, ecology, and economic importance. *Three Class Hours, Four Laboratory Hours*.

431. Physiological Ecology of Plants. Fall (2) Mr. Mathes. Prerequisite or Corequisite: *Biology 311*.

Consideration of the effects of environment on the growth, physiology, and distribution of plants. The factors which determine the adaptability of plants to various habitats will be discussed. (Alternate years; not offered 1977-78).

495-496. Honors. Fall and Spring (3, 3) Staff. Prerequisite: An overall grade point average of 3.0.

Honors is independent study for superior students in Biology. It consists of readings in the field of the student's interest with emphasis on the original literature, the preparation and presentation of an Honors Essay based on the student's own research, and satisfactory completion of a comprehensive examination in the subject area of the research. *Hours to be arranged*.

GRADUATE PROGRAM

The department offers the degree of Master of Arts. For degree requirements, and a full description of graduate courses in biology, write to the department chairman for a Graduate Catalog.

Chemistry

ASSOCIATE PROFESSOR KIEFER (Chairman). PROFESSORS DJORDJEVIC, HILL, SYKES¹, and TYREE. ASSOCIATE PROFESSORS COLEMAN, KRANBUEHL, ORWOLL, SCHIAVELLI, and THOMPSON. ASSISTANT PROFESSORS DOLBOW and HERBST. INSTRUCTOR KATZ.

The student concentrator in Chemistry is afforded the maximum variety of options upon graduation, as exemplified by what recent graduates are now doing. Many go directly into professional life as employees of private industry or governmental agencies in jobs as varied as: secondary school teacher, computer scientist, laboratory scientist, the Peace Corps overseas, plant production, and research associate. Others find their background equally acceptable as qualification for entrance into Medical School, Dental School, Graduate School in Chemistry, Biology, Chemical Engineering, Materials Science, Law, or Business. Thus the thrust of the Department of Chemistry is to educate its concentrators for a profession of the individual's choice. Such has been true for several decades since numbered among the more senior departmental alumni are medical doctors, lawyers, dentists, executives of large corporations, directors of research, secondary school teachers, university professors, research scientists, and administrators.

A number of concentrators engage in research projects in association with a member of the departmental faculty. Normally this is begun during the second semester of the junior year and continued through the senior year. In some cases, a student is able to work on the project in the summer between the junior and senior years.

While the principal goal of the department is to impart scientific competence to its concentrators, the relationship of science (and its methodology) to society as a whole is stressed as well.

REQUIREMENTS FOR CONCENTRATION

The minimum number of semester credits required for concentration in Chemistry is 36. In the normal program this must include Chemistry 101 or 103; either the sequence 102-201-202 or the sequence 206-307-308; 301 (including laboratory); 302 (including laboratory); 303; and 304. The remaining 6 credits are electives chosen from advanced level chemistry courses (300 level and above) as described below.

The Department also offers a concentration with a biochemistry option. In this program, a student may substitute either Cellular Physiology (Biology 405) or Biochemistry (Biology 414) for one chemistry course in the required 36 credits. Ordinarily the student would take the required 30 credits of core courses listed above, a 400-level chemistry course and one of the two biology courses. Students choosing this option must, when they declare their concentration, fill out a form listing all of the courses which they will count toward the concentration. The completed form must be signed by the Chairman of the Department and sent to the Registrar's Office. The forms are available in the Department office.

Chemistry 105, 106, 409, 410, 495, and 496 may not be included in the minimum 36 hours required for concentration. No more than seven semester credits from Chemistry 409, 495, and 496 may be applied toward a degree.

In a typical program planning a concentration in Chemistry will have completed before their junior year either Chemistry 202 or Chemistry 308, Mathematics 212, and Physics 102. Chemistry 305 is recommended for concentrators considering professional careers in chemistry. A reading knowledge of German, French, or Russian is also recommended.

The Department is listed among those approved by the Committee on Professional Training of the American Chemical Society. Those graduates who meet certain minimum standards may be certified for recognition by the Society as having an ACS Certified BS in Chemistry. To meet such standards, Chemistry 102-201-202, 305, and either Chemistry 405, 409 (3 credits), or 495-496 are required.

¹Visiting, 1977-78.

CHEMISTRY

DESCRIPTION OF COURSES

101, 102. Introduction to Chemistry. (A) *Fall and Spring* (4, 4) Mr. Tyree, Mr. Thompson.

An introduction to the study of the common non-metallic and metallic elements with emphasis upon chemical laws and the development and application of chemical principles. Strongly recommended for students expecting to concentrate in chemistry. *101: Three class hours, four laboratory hours in alternate weeks, one hour demonstration in alternate weeks. 102: Three class hours, four laboratory hours.*

103. General Chemistry. (A) *Fall* (4) Mr. Kiefer and Staff.

An introduction to the states of matter, chemical reactions, chemical equilibrium, acids and bases, and electrochemistry. Recommended for students planning a science-oriented career. *Three class hours, four laboratory hours in alternate weeks, one hour demonstration in alternate weeks.*

105, 106. Chemistry: A Cultural Approach. (A) *Fall and Spring* (3, 3) Mr. Thompson, Mr. Kiefer.

A contemporary approach to the concepts of chemistry emphasizing the role of chemistry in today's society. Topics studied include: history and nature of chemistry, nature of matter, nuclear energy, environmental chemistry, synthetic materials, medicinal chemistry, food chemistry, chemistry of life, and general chemical principles. Designed for the non-science major. Permission of the instructor must be obtained if any chemistry courses have been taken previous to this sequence.

201-202. Organic Chemistry. (AS) *Fall and Spring* (4, 4) Mr. Schiavelli, Mr. Hill. Prerequisite: Chemistry 102.

Chemistry of organic compounds. Chemical properties are correlated with electronic and three-dimensional aspects of the compounds of carbon. Recommended for students planning a career in chemistry. *201: Three class hours, four laboratory hours in alternate weeks, one hour demonstration in alternate weeks. 202: Three class hours, four laboratory hours.*

206-307-308. Chemistry and Life. (4, 4, 4) Prerequisite: Chemistry 101 or 103.

This course sequence is designed for students planning a career in medicine or the life sciences.

206. Organic Chemistry. (A) *Spring*. Mr. Coleman and Staff.

An introduction to the functional groups of organic chemistry. Emphasis is placed on the principles of structure and reactivity of organic molecules found in living systems. *Three class hours, four laboratory hours in alternate weeks, one hour demonstration in alternate weeks.*

307. Organic Chemistry. (AS) *Fall*. Mr. Hill and Staff.

A continuation of the development of the chemistry of organic functional groups started in Chemistry 104. Particular emphasis is placed on the role of metals in living systems and the biosynthesis of organic molecules. *Three class hours, four laboratory hours in alternate weeks, one hour demonstration in alternate weeks.*

308. Physical and Bioanalytical Chemistry. (AS) *Spring*. Mr. Schiavelli and Staff.

The application and use of thermodynamics, chemical kinetics, quantitative analysis, and instrumental techniques to the structure and function of chemicals in living systems. *Three class hours, four laboratory hours in alternate weeks, one hour demonstration in alternate weeks.*

301. Introductory Physical Chemistry I. (S) *Fall* (3 or 4) Mr. Herbst. Prerequisites: Chemistry 102 or 206. Prerequisite or corequisite: Physics 101 and Mathematics 212.

CHEMISTRY

The states of matter, thermodynamics, and chemical kinetics. *Three class hours (3 credits) or Three class hours, four laboratory hours (4 credits).*

302. Introductory Physical Chemistry II. (S) Spring (3 or 4) Mr. Herbst. Prerequisite: Chemistry 301 or consent of the instructor. Prerequisite or corequisite: Physics 102.

Chemical kinetics, spectroscopy, quantum mechanics, and introductory statistical mechanics. *Three class hours (3 credits) or Three class hours, four laboratory hours (4 credits).*

303. Quantitative Analysis. (S) Fall (3) Mr. Dolbow. Prerequisite: Chemistry 102 or 206.

Volumetric and gravimetric analysis. *Two class hours, four laboratory hours.*

304. Instrumental Analysis. Spring (3) Mr. Dolbow. Prerequisites: Chemistry 301 and 303.

Principles and applications of instruments to chemical analysis. *Two class hours, four laboratory hours.*

305. Inorganic Chemistry. (S) Fall, Spring (3) Mrs. Djordjevic, Mr. Tyree. Prerequisite: Chemistry 202 or 308 or equivalent.

Properties and reactions of chemical elements and their compounds.

401. Advanced Physical Chemistry. Fall (3) Mr. Orwoll. Prerequisite: Chemistry 302. Quantum chemistry and molecular spectroscopy.

402. Advanced Inorganic Chemistry. Spring (3) Mrs. Djordjevic. Prerequisite or Corequisite: Chemistry 302. Prerequisite: Chemistry 305 or consent of the instructor.

Symmetry and structure. Chemical bonding. Magnetism and spectra in transition metal chemistry. Bioinorganic chemistry.

403. Advanced Organic Chemistry. Fall (3) Mr. Sykes. Prerequisite: Chemistry 202 or 308. Prerequisite or Corequisite: Chemistry 301.

A structure-reactivity approach to reaction mechanisms, applications of spectroscopic methods to structural analysis, and modern synthetic chemistry.

405. Modern Laboratory Techniques. Fall (3) Mr. Coleman, Mr. Thompson. Prerequisite: Chemistry 304 or equivalent.

A laboratory course providing exposure to modern experimental techniques in all areas of chemistry. *One class hour, six laboratory hours.*

406. Radiochemistry. Spring (3) Mr. Kiefer. Prerequisite or Corequisite: Chemistry 302.

A study of radioactive decay, interaction of radiation with matter, nuclear structure, nuclear reactions, radiochemical techniques.

408. Chemical Kinetics. Spring (3) Mr. Herbst. Prerequisite: Chemistry 302.

An investigation of theoretical and experimental methods used to determine rates of chemical reactions. (Not offered 1977-78.)

409. Introduction to Chemical Research. Fall and Spring (credits to be arranged). Staff. May be taken with the consent of the Department.

A course for the advanced student affording an opportunity for individual work on a problem under the supervision of an individual faculty member. *One hour per week is devoted to the departmental seminar; otherwise, hours are to be arranged.*

410. Seminar in Applied Chemistry. Fall (1) Mr. Hill.

A series of seminars by scientists primarily from industry and government. The course

CLASSICAL STUDIES

is open to chemistry majors or by permission of the instructors. (Alternate years; offered in 1977-78.)

412. Introduction to Macromolecules. Spring (3) Mr. Orwoll. Prerequisite or Corequisite: Chemistry 302 or consent of the instructor.

A study of the relationships of chemical and physical properties of synthetic and biological polymers to their molecular structure.

495-496. Honors. Fall and Spring (3, 3) Staff.

Students admitted to Honors Study in Chemistry will be enrolled in this course during both semesters of their senior year. The requirements include a program of research in chemistry with readings from the original literature, the preparation and presentation of an Honors Essay based on the student's reading and research, and the satisfactory completion of a comprehensive examination in the subject area of the research. One hour per week is devoted to the departmental seminar; otherwise, hours are to be arranged.

GRADUATE PROGRAM

The Department offers the degree of Master of Arts. For degree requirements, and a full description of graduate courses in chemistry, write to the Department Chairman for a graduate catalog.

Classical Studies

PROFESSORS LEADBEATER (*Chairman*) and JONES (CHANCELLOR PROFESSOR). ASSOCIATE PROFESSORS BARON and REILLY.

PROGRAM

The principal objectives of the Department of Classical Studies are two:

1. To contribute broadly to the humanistic education of the undergraduate student both through courses involving the reading of Greek and Latin literature in the original languages and through courses conducted in English in the area of Classical Civilization;
2. To offer those students who wish it a specialized training in the Greek and Latin languages or in Classical Civilization for vocational or professional purposes.

In recent years, a large number of graduates have become teachers at the secondary level or have continued their study of the Classics in graduate school. Equally as many others have used their undergraduate training as a basic educational background for various businesses, occupations and professions.

AREA AND SEQUENCE REQUIREMENTS

Students electing to meet, in Classical Studies, the general College requirement of a sequence of four courses will normally be expected to complete four courses in a single subject field; i.e., Greek or Latin or Classical Civilization. Comparative Literature 201-202 may be combined with two advanced literature courses in Classical Studies to form a sequence.

CONCENTRATION REQUIREMENTS

The Department of Classical Studies offers concentrations in three subject fields: Greek, Latin, and Classical Civilization.

A concentration in Greek consists of a minimum of 27 hours taken in the Department of Classical Studies, exclusive of courses in Classical Civilization. A minimum of six hours of Latin is required.

CLASSICAL STUDIES

A concentration in Latin consists of a minimum of 27 hours taken in the Department of Classical Studies, exclusive of courses in Classical Civilization. A minimum of six hours of Greek is required.

A concentration in Classical Civilization consists of a minimum of 35 hours divided as follows:

- (1) 8 hours of elementary Latin or Greek
- (2) 27 hours from courses listed below under the heading "Classical Civilization" (pp. 72-74) or included in the following list: Anthropology 301, Anthropology 352, Fine Arts 403, Government 303, History 311, Philosophy 424 (Plato), Philosophy 426 (Aristotle), Religion 220, Religion 305, Theatre 315. Among the courses selected must be 18 hours representing three one-year sequences from three of the following areas: Classical Literature, Classical History, Classical Art & Archaeology, Classical Philosophy.

NOTE: All students concentrating in Greek, Latin, or Classical Civilization will be required to demonstrate on examination a knowledge of Classical literature and of the history of the ancient world. (Requirement may be met by completing satisfactorily Classical Civilization 207, 208, 311, and 312).

Students who have taken Latin in high school and wish to continue it at the College will be placed in the level appropriate to them on the basis of their achievement test scores in Latin. No student who has acquired four credits of high school Latin will be allowed to take Latin 101-102 for credit.

DESCRIPTION OF COURSES

101-102. Elementary Greek. *Fall and Spring (4, 4) Mr. Leadbeater.*

The elements of the Greek language with translation of stories and poems from selected readers. Parallel study of aspects of Greek civilization and of the legacy left by Greek culture and thought to the modern world.

201. Introduction to Greek Literature: Prose. (A) *Fall (3) Ms. Reilly. Prerequisite: Greek 102.*

A course designed to introduce the student to the basic syntactical and stylistic elements of 5th-4th cent. B.C. Attic prose through an intensive examination of selected works of Plato, Lysias, and Thucydides. Emphasis will be placed on literary techniques and the comprehension and appreciation of Greek in Greek rather than in English.

202. The Literature of Greece: Prose and Poetry. (A) *Spring (3) Ms. Reilly. Prerequisite: Greek 201.*

Continued analysis of the style, compositional techniques and content of representative prose writers, such as Plato, Aristotle, Herodotus, and Xenophon. In the second half of the semester the student will be introduced to the form and content of dramatic poetry through the reading of one of the tragedies of Sophocles or Euripides.

***Greek Literature Cycle.** *Fall or Spring (3) Mr. Leadbeater and Ms. Reilly. Prerequisite: Greek 202 or permission of the instructor.*

The following courses are offered as the needs and wishes of students in the Department in any year may demand and as staff is available.

301. Philosophy—Plato. (AS)

302. New Testament—The Gospels, Acts and Epistles. (AS)

303. Homer—Selections from Iliad and Odyssey. (AS)

304. Philosophy—Aristotle. (AS)

305. Attic Orators. (AS)

CLASSICAL STUDIES

- 402. Herodotus. (AS)
- 403. Thucydides. (AS)
- 404. Lyric Poetry. (AS)
- 405. Greek Tragedy—Aeschylus, Sophocles, Euripides (AS)
- 406. Greek Comedy—Aristophanes and Menander. (AS)
- 490. Topics in Greek—Course may be repeated if readings differ. (S)

Latin

101-102. Elementary Latin. Fall and Spring (4, 4) Mr. Baron. Students who have acquired four units of Latin in high school may not take Latin 101-102 for credit.

This course is designed to equip the student with a mastery of the structure of the Latin language and with a knowledge of basic vocabulary. There are translations from appropriate Latin texts and parallel study of pertinent aspects of Roman life and history.

201. Introduction to Latin Prose. (A) Fall (3) Ms. Reilly. Prerequisite: Latin 102 or placement on the basis of achievement test score.

There will be a review of forms and syntax after which some major prose author will be read at length.

202. Introduction to Latin Poetry. (A) Spring (3) Staff. Prerequisite: Latin 201 or placement on the basis of achievement test score.

A major poet will be read at length or numerous brief selections from Classical and medieval Latin poetry will be covered.

249, 250. Literature of the Republic and the Empire. (AS) Fall and Spring (3, 3) Ms. Reilly. Prerequisite: Latin 201, 202 or placement on the basis of achievement test score.

The reading of selections from a number of important writers of the periods of the Republic and Empire.

***Latin Literature Cycle.** Fall or Spring (3) Mr. Jones and Mr. Baron. Prerequisite: Latin 201, 202 or equivalent.

The following courses are offered as the needs and wishes of students in the Department in any year may demand and as staff is available.

- 301. Cicero's and Pliny's Letters. (AS)
- 302. Latin Lyric: Catullus and Horace. (AS)
- 303. Cicero's Orations. (AS)
- 304. Elegiac Poets: Propertius, Ovid, Tibullus. (AS)
- 305. Roman Comedy: Plautus and Terence. (AS)
- 307. Roman Private Life: A study based on the Latin authors. (AS)
- 308. Latin Composition based upon a Classical Model.
Reading of such Latin prose authors as Caesar, Cicero, and Nepos followed by the writing of connected Latin passages in imitation of their style.
- 310. Medieval Latin—Prose and Poetry. (AS)
- 401. Horace's Satires and Epistles. (AS)
- 402. The Latin Historians. (AS)

CLASSICAL STUDIES

404. Vergil—The Latin Epic. (AS)

405. The Teaching of High School Latin. Same as Education S305. Development of the Latin curriculum, methods of presentation, audio-visual aids, materials.

406. Satires of Juvenal and Epigrams of Martial. (AS)

407. Lucretius—De Rerum Natura. (AS)

408. The Latin Novel: Petronius or Apuleius. (AS)

490. Topics in Latin.—Course may be repeated if readings differ. (S)

GRADUATE COURSES—GREEK AND LATIN

500. Special Topics. Summer only (3) Staff. This course may be repeated if the topic is basically different.

A. Seminar in Greek Literature. Intensive study of individual Greek authors or genres, varying from year to year in accordance with the students' needs;

B. Seminar in Latin Literature. Intensive study of individual Latin authors or genres, varying from year to year in accordance with the student's needs.

Latin 510T. The Programmed Latin Course. Summer only (2) Staff.

CLASSICAL CIVILIZATION

For the following courses, a knowledge of Latin or Greek is not required. Courses numbered in the 200's are open to *all* students of the College. Courses numbered in the 300's and 400's are open to *sophomores, juniors, and seniors.*

Classical Civilization 150. Freshman Seminar. *Fall* (3) Mr. Jones.

Buried cities of Vesuvius: Pompeii, Herculaneum, and Stabiae.

Classical Civilization 150. Freshman Seminar. *Spring* (3) Mr. Baron.

A study of the problem of destiny and free will in the legends of selected Greek, Roman, and Nordic heroes.

Classical Civilization 205. Greek and Roman Mythology. (A) *Fall and Spring* (3) Mr. Baron.

The origins and development of Classical mythology and heroic legend as religious belief, its relation to other mythologies, and its adaptation as literary and artistic symbol from Homer through the twentieth century A.D.

Classical Civilization 207. Greek Literature. (A) *Spring* (3) Mr. Baron and Ms. Reilly.

A survey of the literary developments of ancient Greece which have influenced the form and content of European literature down to the present day. Areas studied include epic and lyric poetry, tragedy and comedy, historiography and rhetoric, and the philosophical dialogue.

Classical Civilization 208. Latin Literature. (A) *Fall and Spring* (3) Mr. Baron.

A survey of Latin literature; both the classical Roman adaptation of our inheritance from Greece and the development of native traditions from the days of the Roman Republic through the Middle Ages. Topics include Roman comedy, the Latin epic, Classical and medieval lyric, satire, and ancient and medieval prose forms.

Classical Civilization 217. Greek Archaeology and Art. (AS) *Fall* (3) Ms. Reilly.

An archaeological consideration of the Minoan, Mycenaean, Archaic and Classical periods of Greek civilization. Architecture, sculpture, painting and the minor arts are included.

CLASSICAL STUDIES

Classical Civilization 218. Roman Archaeology and Art. (AS) Spring (3) Ms. Reilly.

The architecture, painting and sculpture of Hellenistic Greece and of Rome until the 4th c. AD. from the archaeological viewpoint. Byzantine art as found in Greece and Italy will also be included.

Classical Civilization 311, 312. Ancient History. (AS) Fall and Spring (3, 3) Mr. Jones.

Ancient Civilization from prehistoric times to the downfall of the Roman Empire. The first semester deals with the ancient Orient and Greece; the second semester with Rome. This course is the same as History 301, 302.

NOTE: Students who wish to continue the study of ancient history in the department of Classical Studies should plan to enroll in Classical Civilization 402 (see below), to be offered Spring, 1978.

Classical Civilization 314. The Ancient City in Greece and Italy. (S) Fall or Spring (3) Ms. Reilly.

The development of urban areas of Greece and Italy between 3000 B.C. and 400 A.D. Readings from ancient authors in English translation will provide viewpoints of ancient observers on the urban scene. Techniques of excavations and types of evidence which give us information about life in ancient cities, towns and villages will also be studied.

Classical Civilization 331. Greek Philosophy (S) Fall (3) Ms. Belgum¹. Prerequisites: Two courses in Philosophy or consent of the instructor.

A critical examination of representative Greek philosophers with special emphasis on Plato and Aristotle. This course is the same as Philosophy 331.

Classical Civilization 401. Greek and Latin Epic. (S) Fall or Spring (3) Staff.

Careful reading, in English, of Homer's *Iliad* and *Odyssey*, Vergil's *Aeneid*, Lucan's *Pharsalia*. Discussion of the character and structure of the Classical epic and its influence on European epic and novel. This course is the same as Comparative Literature 301.

Classical Civilization 402. The Greek and Roman Historians. (S) Spring (3) Mr. Jones.

The study, in translation, of the major historians of Greece and Rome, including Herodotus, Thucydides, Livy, and Tacitus, with particular regard to content, literary and historical technique, and historical perspective.

Classical Civilization 403. Classical Tragedy and Its Influences. (S) Fall or Spring (3) Mr. Leadbeater.

Readings, in English, and discussion of the major works of Aeschylus, Sophocles, Euripides, and Seneca. Parallel readings in the theories of tragedy and of representative works, illustrating the influence of Classical Tragedy on subsequent literary history. This course is the same as Comparative Literature 305.

Classical Civilization 404. Ancient Comedy and Its Influence. (S) Fall or Spring (3) Mr. Leadbeater.

A study, in translation, of representative works of Aristophanes, Menander, Plautus, and Terence. Parallel readings in the theories of comedy and of representative works illustrating the influence of Ancient Comedy on subsequent literary history. This course is the same as Comparative Literature 306.

Classical Civilization 405. Later Greek Philosophy. (S) Fall or Spring (3) Mr. Leadbeater.

A study of the later aspects of Greek philosophy as they took form in Neo-Platonism and the Second Sophistic Movement. The course is intended to be an examination of Platonism as it developed in the philosophies of Plotinus, Iamblichus, Julian, and others.

¹Assistant Professor of Philosophy.

COLLEGE COURSES

Emphasis will be placed on the mysticism of the age and the reaction of and influence on Christian thought as revealed in selected readings from the Church Fathers.

Classical Civilization 490. Special Topics in Classical Civilization. (S) *Fall* or *Spring* (3) Staff.

A study in depth of some particular aspect of Greco-Roman culture. This course is intended for the student who already has some background in Classical Civilization. The course may be repeated if the topic is basically different.

Classical Civilization 500T. The Classical Humanities in the High School curriculum. *Summer* only (3) Mr. Leadbeater.

HONORS STUDY

495, 496. Honors. *Fall* and *Spring* (3, 3) Staff.

The Department of Classical Studies offers Honors Study in Greek or Latin as staff is available. Students admitted to this study will be enrolled in the course during both semesters of their senior year. The course comprises: (a) reading and discussion of selected authors in the language of the student's emphasis, Greek or Latin; (b) supervised reading of a special bibliography in the field of the student's major interests; (c) satisfactory completion by April 15, of a scholarly essay; and (d) satisfactory completion of a comprehensive oral examination in the field of Greek and Latin Literature.

College Courses

College courses are interdisciplinary courses or courses not falling under the usual departmental offerings. These courses are taught by individual instructors or by a group of instructors who wish to explore a subject outside the present departmental programs.

College Course 305. Science and Technology in Humanistic Perspective. *Fall* (3). Prerequisite: none.

A study of the nature and interrelationships of science and technology and religion and ethics. The main part of the course is an interdisciplinary discussion of the influence of recent advances in science and technology on social and political decisions and an evaluation of their moral and religious implications. Among the issues considered are nuclear power and weaponry, earthquake prediction and prevention, and the uses of land and water resources.

Comparative Literature

PROFESSOR LEADBEATER (*Chairman of the Committee*), ASSISTANT PROFESSOR TRIOLO, and ASSISTANT PROFESSOR WIGGINS.

Courses in Comparative Literature fulfill Area and Sequence requirements in Area I. Students may complete a sequence in Comparative Literature by taking Comparative Literature 201, 202 and two of the courses on the 300 level listed below or any two advanced literature courses in the departments of Classical Studies, English, or Modern Languages, including courses in literature in translation. An interdisciplinary concentration in Comparative Literature is available upon petition to the Committee for Comparative Literature and the Committee on Interdisciplinary Study.

201, 202. Concepts in Comparative Literature. (A) *Fall* and *Spring* (3, 3) Mr. Leadbeater, Mr. Triolo, and Ms. Kerst.

COMPARATIVE LITERATURE

An introduction, through the critical examination of selected literary works of major importance from various periods, to the major modes and techniques of comparative literature. Modes such as genre, literary devices, and chronological development of literary concepts will be examined from a comparative point of view.

203, 204. The Literature of East Asia. (A) *Fall and Spring* (3, 3) Mr. Canning.

An introduction to major works in Chinese and Japanese literature. Fall semester: traditional and modern Chinese literature, including the Confucian classics, poetry, drama, short stories and the novel. Spring semester: traditional and modern Japanese literature, with special emphasis on the novel from *The Tale of Genji* (11th century) to modern works by Mishima, Kawabata, Tanizaki and other leading authors.

301. Greek and Latin Epic and Its Influence. (S) *Fall or Spring* (3) Mr. Baron. (Same as Classical Civilization 402)

Careful reading, in English, of Homer's *Iliad* and *Odyssey*, Vergil's *Aeneid*, and Lucan's *Pharsalia*. Discussion of the character and structure of the Classical Epic and its influence on European epic and novel.

302. Epic and Romance. (S) *Fall* (3) Mr. Wiggins. (Same as English 435)

An intensive study of the development of these major genres, with illustrative works drawn from ancient, Medieval and Renaissance authors.

303. The World Novel. (S) *Spring* (3) Ms. Kerst. (Same as English 436)

An intensive study of selected works of fiction primarily by European authors from the eighteenth century to the present.

304. Contemporary French Novel and Its Influence. (S) *Spring* (3) Mr. Hallett. (Same as French 388)

A study, in English translation, of trends in the Modern French Novel and their influence on contemporary literature.

305. Classical Tragedy and Its Influences. (S) *Fall* (3) Mr. Leadbeater. (Same as Classical Civilization 403)

Readings, in English, and discussion of the major works of Aeschylus, Sophocles, Euripides, and Seneca. Parallel readings in the theories of tragedy and of representative works, illustrating the influence of Classical Tragedy on subsequent literary history.

306. Ancient Comedy and Its Influences. (S) *Spring* (3) Mr. Leadbeater. (Same as Classical Civilization 404)

A study, in translation, or representative works of Aristophanes, Menander, Plautus, and Terence. Parallel readings in the theories of comedy and of representative works illustrating the influence of Ancient Comedy on subsequent literary history.

307. Contemporary French Theatre and Its Influence. (S) *Fall* (3) (Same as French 387)

A study, in English translation, of trends in Modern French theatre and their influence on contemporary drama.

401. Lyric Poetry. (S) *Fall and Spring* (3, 3) Mr. Leadbeater and Mr. Wiggins.

An intensive study from a comparative point of view of the development of lyric poetry. Emphasis will be on lyric from the Classical through the Renaissance periods, although some lyric from other periods will be included as the needs of the course demand.

450. Seminar in German/French Literature. (S) *Fall* (3) Mr. Kallos. (Same as German 450)

A seminar in comparative readings of the Poetry of Rainer Maria Rilke and Charles Baudelaire in the original languages. Lectures will be given in English.

Economics

PROFESSORS GARRETT (Chairman), MATTHEWS and SCHIFRIN.¹ ASSOCIATE PROFESSORS BAKER, BARRY, HAULMAN² and MOODY. ASSISTANT PROFESSORS ARCHIBALD, FINIFTER, HARRIS, STRAUSS and SANDERSON. VISITING ASSISTANT PROFESSORS BAZAN and GATES.

The program in Economics is designed to offer courses of study that provide foundations for enrollment in professional programs such as Law and Business, for advanced work in Economics, and for careers as economists after completion of the B.A. degree.

REQUIREMENTS FOR CONCENTRATORS

Concentration in Economics requires a minimum of thirty semester hours of courses in Economics beyond Economics 101, 102. All concentrators are required to take the following courses:

303. Intermediate Economic Theory: Microeconomics

304. Intermediate Economic Theory: Macroeconomics

307. Principles and Methods of Statistics

Special programs may be arranged in which these required courses can be waived by permission of the Department.

DESCRIPTION OF COURSES

101, 102. Principles of Economics. (A) *Fall and Spring* (3, 3). This course is a prerequisite to all courses in Economics except 307. Staff.

An introduction to the analytical tools commonly employed by economists in the study of the determination of the composition of output, prices, and the aggregate level of economic activity. Problems related to these subjects are considered, and alternative courses of public policy are evaluated.

303, 304. Intermediate Economic Theory. (S) *Fall and Spring* Mr. Archibald, Mr. Barry, Mr. Gates, Mr. Moody, Mr. Harris and Mr. Finifter. *Prerequisite:* Econ. 101, 102.

The first semester is devoted to the theory of resource allocation in a market economy. The second semester is devoted to the theory of national income determination.

307. Principles and Methods of Statistics. *Fall and Spring* (3) Mr. Sanderson and Mr. Moody.

A study of the principles and uses of frequency distribution, measures of central tendency and dispersion, statistical inference, sampling, correlation and regression analysis. *Two Class Hours, Two Laboratory Hours.*

311. Money and Banking. (S) *Fall and Spring* (3) Mr. Matthews. *Prerequisite:* Econ. 101, 102.

An analysis of the monetary system with emphasis upon determinates of the money supply and the relationship between money and economic activity.

321. Economics of the Public Sector (S) *Fall and Spring* (3). Mr. Baker and Mr. Harris. *Prerequisites:* Econ 101, 102.

Theory and principles of public finance with emphasis on federal expenditures and taxes, intergovernmental relations, voting models, cost-benefit analysis, and case studies on selected topics such as education, crime, housing, water resources and health.

¹On leave, Fall 1977.

²On leave 1977-78.

ECONOMICS

341. American Economic History. (S) Fall and Spring (3) Mr. Sanderson. Prerequisites: Econ. 101, 102, or permission of instructor.

A study of the major trends and developments in the American economy from colonial times through the New Deal. Emphasis is on the use of economic theory and quantitative methods in the study of history.

345. Urban Analysis. (S) Fall and Spring (3) Mr. Garrett, Mr. Finifter and Ms. Bazan. Prerequisite: Econ. 101, 102.

An economic analysis of contemporary urban problems including structure and growth, housing, transportation, fiscal issues, urban labor markets, and central city and ghetto development.

361. Government and Business. The Enforcement of Competition. (S) Spring (3) Mr. Schifrin. Prerequisites: Econ. 101, 102.

An analysis of the factors that influence and determine business conduct and market performance. Special emphasis is given to the philosophy and features of the anti-trust laws and to the enforcement of market competition through their application.

407. Econometrics. (S) Spring (3) Mr. Moody. Prerequisites: Econ. 101, 102, 307, or permission of instructor.

An introduction to econometric methods which are used to estimate and test models against available data. Much of the course will deal with problems such as autocorrelation, lags, and simultaneous equations which commonly arise in applied economic analysis. (Not offered 1977-78).

411. Macroeconomic Adjustments: Inflation and Unemployment. (S) Fall (3) Mr. Archibald. Prerequisites: Econ. 303, 304.

A critical survey of the current state macroeconomic model building including discussions of neoclassical, Keynesian, and disequilibrium models, emphasizing the microeconomic foundations of the macroeconomic phenomena of inflation and unemployment.

412. Stabilization Policy. (S) Spring (3) Mr. Barry. Prerequisites: Econ. 101, 102, 304 or 311.

Analysis of stabilization policy with emphasis on the joint impact of monetary and fiscal policies with respect to the objectives of full employment, economic growth and price stability.

422. Economics of the Environment. (S) Spring (3) Mr. Baker. Prerequisites: Economics 101, 102.

The application of efficiency and equity criteria to environmental issues. Topics will include natural resource economics and problems of congestion.

425. Welfare Economics and Political Economy. (S) Spring (3) Mr. Harris. Prerequisites: Econ. 303 or 421 permission of the instructor.

An introduction to theoretical welfare economics and social philosophy from an economist's perspective. Applications to such topics as the economics of redistribution, radical critiques of capitalism, the economics of law and justice and the desirable scope of government.

431. Introduction to Mathematical Economics I. (S) Fall (3) Mr. Moody. Prerequisites: Econ. 101, 102. (Not offered 1976-77.)

A survey of mathematical techniques widely used in economics including topics in set theory, linear algebra, linear programming and game theory. Emphasis will be on the economic applications of these methods.

432. Introduction to Mathematical Economics II. (S) Spring (3) Mr. Moody. Prerequisites: Econ. 101, 102, 431.

ECONOMICS

The topics covered in this course are selected from among differential and integral calculus, optimization techniques and differential equations, with emphasis on the economic content and application of the techniques.

441. Topics in Economic History. (S) Spring (3) Mr. Sanderson. Prerequisites: 101, 102, or permission of instructor. (Not offered 1977-78.)

An examination of current research work in United States and European economic history and the recent contributions of the New Economic Historians. Major sections include slavery, the economic role of government, and strategic factors in economic growth.

444. Regional Growth and Planning: Emphasis on the South. (S) Spring (3) Mr. Garrett. Prerequisites: Econ. 101, 102.

The course begins with an analysis of the economic growth of the South prior to the Civil War and proceeds to an analysis of differential regional growth rates. Sub-regional or local growth and planning are studied in a contemporary context.

446. History of Economic Thought. (S) Fall (3) Mr. Haulman. Prerequisites: Econ. 101, 102.

The development of economic analysis with emphasis upon Classical and Marxian economics. (Not offered 1977-78)

451. Labor Market Analysis. (S) Fall (3) Mr. Finifter. Prerequisite: Econ, 101, 102.

An analysis of the empirical evidence and theories of labor demand and labor supply with special emphasis on wage differentials, the unemployment—inflation tradeoff, the impact of labor unions on the economy, and manpower policy problems.

452. The Economics of Human Resources. (S) Spring (3) Mr. Finifter. Prerequisite: Economics 101, 102.

An examination of trends in poverty, income distribution, and manpower development policy. The concept of human capital is studied in detail, with special reference to education, health, and labor migration as human capital investments.

453. Economics of Education. (S) Fall (3) Mr. Finifter. Prerequisites: Econ. 101, 102.

An analysis of the economic aspects of education. Topics include benefit-cost analysis and the “profitability” of all levels of education, the educational production process, education and family wealth, public financing of education, and manpower and educational planning techniques.

455. Population Economics. (S) Spring (3) Mr. Haulman. Prerequisites: Econ. 101, 102.

The study of the relationship of economics and population with a view toward analyzing the role of population change in models of economic growth and development and discussing the economic determinants of demographic behavior using models of economic decision-making. (Not offered 1977-78)

462. Government Regulation of Business. (S) Spring (3) Messrs. Baker and Schifrin. Prerequisites: Econ. 101, 102.

An analysis of the principles and purposes of government regulation of business. Topics will be selected from the following: transportation, health, energy policy, consumer protection, agriculture, defense procurement, scientific research and development, public utilities, and public enterprise.

465. The Imperfectly Competitive Firm. (S) Fall (3) Mr. Harris. Prerequisites: Econ 303.

Recent developments in the behavioral theory of the firm with particular attention to empirically testable hypotheses. Focus will be upon risk, portfolio choice, and those aspects of “market failure” resulting from imperfect information about products, managers, rival firms and stochastic demand.

ENGLISH LANGUAGE AND LITERATURE

471. International Economics. (S) Fall (3) Mr. Matthews. *Prerequisites:* Econ. 101, 102.

This course develops the theory of international trade from the Mercantilists to the modern economists. The objective is to give the student basic knowledge of analytical tools used by economists in the study of international economic problems.

472. International Trade and Policies. (S) Spring (3) Mr. Matthews. *Prerequisites:* Econ. 101, 102.

This course analyzes historically problems in tariffs and other protectionist devices, the effect of economic development on the pattern of world trade, and problems in balance of payments equilibrium, foreign exchange, and international finance. Particular attention is focused on international economic developments since World War II.

482. Comparative Economic Systems. (2) Fall (3) Mr. Strauss. *Prerequisites:* Econ. 101, 102.

A comparative analysis of economic systems and the performance of such economies as measured by growth, equity and efficiency criteria. Theoretical systems are employed, as well as an examination of the U.S., West and East Europe, the Soviet Union, China and Cuba.

483. Economic Development. (S) Spring (3) Mr. Strauss. *Prerequisites:* Econ 101, 102.

The definition and measurement of development is examined in the current world context, followed by an examination of the causes of underdevelopment. A positive approach to development is stressed in examining in detail the required economic, social and political changes, both internal and external, for its success.

400. Seminar. Fall, Spring (3). *Prerequisites:* permission of the instructor. *Special topics of interest to staff and students will be discussed in seminar.*

Spring, Models of World Dynamics, Mr. Strauss.

490. Topics in Economic Policy. Fall and Spring (3) Staff. *Prerequisites:* Concentration in Economics, Senior standing and permission of instructor.

A directed readings course conducted on an individual or group basis on various topics in economic policy.

495, 496. Honors. Fall and Spring (3) Staff.

Advanced study on a tutorial basis the first semester. In the second semester each student undertakes independent research on a selected topic and presents an Honors Essay. Each Honors student is responsible for (a) the supervised reading of a selected list of books in economics; (b) satisfactory completion by April 15 of an original essay, or other scholarly projects in the field of economics; and (c) satisfactory performance on a comprehensive oral examination. A student who completes the Honors essay but does not achieve Honors may be given credit for Economics 490.

English Language and Literature

PROFESSORS SMITH (Chairman), BALL, C. DAVIDSON, DOLMETSCH¹, DONALDSON², FEHRENBACH, JENKINS³, McCULLY⁴, NETTLES, and WILLIS. ASSOCIATE PROFESSORS CONLEE, DAVIS, DAW, EDELSTEIN⁴, ELLIOTT, MACCUBBIN, SAVAGE³, and SCHOLNICK. ASSISTANT PROFESSORS EPSTEIN, HARRIS³, HEACOX, HILL, KLAPPERT, MEYER⁴, MEYERS, PORUSH, REED, SOUTHARD, TYLER, WENSKA, WESTERMAN, and WIGGINS. ADJUNCT LECTURER A. DAVIDSON.

¹On leave, Fall, 1977-78.

²On leave, Spring, 1977-78.

³On leave, 1977-78.

⁴Visiting, 1977-78.

ENGLISH LANGUAGE AND LITERATURE

THE PROGRAM IN ENGLISH

The Department of English Language and Literature provides numerous distinctive opportunities for the full humanistic development of the individual student, ranging from the development of skills in written communication through increased sensitivity to language and awareness of the aesthetic and intellectual enjoyments of literature to an understanding of the cultural values reflected in that literature.

The Department attempts to fulfill several specific obligations within the liberal arts program of the College. On behalf of the faculty as a whole, it provides formal instruction in the elements of English composition. As area and sequence components of the general curriculum, the Department offers courses that introduce the student to the essential nature of literature and literary study. Finally, the course offerings in English, American and comparative literatures, linguistics and writing provide a rich and varied program of electives for students who are not English concentrators.

In its concentration program the Department serves students who are seeking to teach in the public schools; students who are preparing for graduate study in English; students who find such study an appropriate liberating experience in advance of their entering upon professional studies in other fields, such as law, medicine, psychology and theology; and students who choose English simply because they enjoy the disciplined study of literature and language and respond to its humanizing influence. In order to satisfy these particular needs, the Department has devised a single, unified program of concentration that affords the student unusual freedom in his choice of courses, teachers and learning experiences. The English concentrator is asked to satisfy a pattern of distribution in the Department rather than to take specific courses.

AREA AND SEQUENCE REQUIREMENTS

Area and sequence requirements in Area I may be satisfied by choosing courses in either literature or linguistics. Students are advised (though not required) to follow one of the following patterns:

1. Literature: The area requirement would be met by two literature courses in the 200-level. The Department recommends that students begin with English 201, "The Art of Literature," and further recommends that the sequence requirement be met by two additional courses chosen from among those numbered above 300 which belong to the same group as the second course elected for the area requirement. Course groups in literature are indicated in the course descriptions by the following Roman numerals: I. (English Literature); II. (American Literature); III. (General Literature, including courses in Comparative Literature).

2. Linguistics: The area requirement would be met by English 211, "The Study of Language," and English 212, "Language in America." The sequence requirement would be met by choosing two additional courses having the Roman numeral designation IV (Linguistics).

REQUIREMENTS FOR CONCENTRATION

A concentration in English requires a minimum of 36 credits in departmental courses (exclusive of English 101) at least 27 of which must be in courses numbered 300 and above, including the following.

- I. One course in the study of a major author, chosen from English 413, 421, 422, or 426.
- II. Three courses surveying periods of literature, chosen in the following manner:
 - a. One course in English literature before 1750, chosen from English 312, 323, 324, 331.
 - b. One course in English literature after 1750, chosen from English 332, 341, 342, 352.

ENGLISH LANGUAGE AND LITERATURE

- c. One course in American literature, chosen from English 361, 362, 363, 364.
- III. One course in the study of a genre, chosen from English 429, 435, 436, 439, 440, 451, 452, 454.

English concentrators who do not offer courses in Comparative Literature in satisfaction of Area I requirements may include Comparative Literature 201 and 202 in the first 36 credits of their concentration program.

Concentration courses are chosen by the student in consultation with a departmental advisor on the basis of the student's preparation, background, vocational expectations and further educational interests. A sound concentration program should include, in addition to the requisite courses in English, a coherent pattern of complementary courses in other departments and allied fields chosen in consultation with the advisor. Concentrators normally begin their concentration programs with English 203 and 204.

DESCRIPTION OF COURSES

COLLEGE COURSES

101. Writing. *Fall and Spring* (3) Staff.

Practice in writing under supervision, with frequent conferences. Required of freshmen who are not exempted by test scores or special examination and recommended for all. Sections limited to fifteen students each.

150. Freshman Colloquium. *Fall and Spring* (3) Staff.

Exploration of a limited topic in literature or in the relationship of literature to other fields. Sections limited to fifteen students each, with emphasis upon oral participation and critical writing. Seminar topics are announced in advance of each semester so that the student may choose his section on the basis of interest, background and academic goals.

INTRODUCTORY COURSES

The following courses are especially designed for freshmen and sophomores. Upperclassmen may be admitted to them only upon consent of the Department Chairman. This restriction, however, does not apply to English 211 and 212.

201. The Art of Literature. (A, I, II, III) *Fall and Spring* (3) Staff.

An introductory course in critical reading and writing designed to increase the student's understanding and enjoyment of the literary arts. This course should normally be taken before the student proceeds to other area or concentration courses in English.

203. Major English Writers, Medieval and Renaissance. (A.I) *Fall and Spring* (3) Staff.

Study of the most important English authors before 1700, including Chaucer, Shakespeare and Milton, viewed in relation to the background of their time.

204. Major English Writers, Eighteenth and Nineteenth Centuries. (A.I) *Fall and Spring* (3) Staff.

Study of five or six masters of English literature since 1700, chosen from such writers as Pope, Swift and Fielding in the eighteenth century; Wordsworth, Coleridge and Keats in the Romantic Period; Dickens, Tennyson and Arnold in the Victorian.

207. Major American Writers. (A. II) *Fall and Spring* (3) Staff.

Study of five or six American authors, emphasizing each writer's conception of his situation and role in American society. One or more continuing themes may also be emphasized.

208. Contemporary Literature. (A. I. II. III) *Fall and Spring* (3) Staff.

Study of selected works of English and American literature written from the 1950's to

ENGLISH LANGUAGE AND LITERATURE

the present, with emphasis on important themes and the developing genres of fiction, drama, and poetry.

211. The Study of Language. (A. IV) *Fall and Spring* (3) Mr. Ball, Mr. Conlee, and Mrs. Reed.

An introduction to the scientific study of the elements of language, including sound and writing systems, grammatical approaches, social and regional language differences, and the backgrounds of American English. No prerequisites.

212. Language in America. (A, IV) *Fall and Spring* (3) Mr. Ball and Mrs. Reed.

A study of the origin, development and present state of American English, including American Indian languages and other non-English influences, regional varieties, social dialects and levels of usage in contemporary America.

ADVANCED COURSES

301. Advanced Writing. *Fall and Spring* (3) Staff.

Practice in writing papers of various types under supervision, emphasizing expository techniques. Sections limited to fifteen students each.

***302. Creative Writing.** *Fall and Spring* (3) Mr. Heacox, Mr. Klappert and Mr. Porush.

An opportunity for the student to develop his abilities in imaginative writing of various types, especially fiction and poetry, under supervision. Sections limited to fifteen students each. Prerequisite: English 101 or exemption from the degree requirements in writing. Consent of Instructor is required for enrollment.

(The student should have satisfactorily completed at least one 200-level English courses before enrolling for any of the following courses.)

312. Medieval Literature. (S. I) *Spring* (3) Mr. Davidson.

A study of selected major works and other representative examples of Old and Middle English literature, exclusive of Chaucer. The course will explore the development of typical medieval attitudes and themes in a variety of literary forms and genres.

323. The English Renaissance. (S.I.) *Fall* (3) Mr. Fehrenbach.

A survey of the poetry, prose, and drama of Tudor England, including selected works of More, Sidney, Spenser, Marlowe, and Shakespeare. Primarily lectures.

324. The Early Seventeenth Century. (S.I) *Spring* (3) Staff.

A survey of poetry, prose, and dramatic forms from John Donne and Ben Jonson to 1660, including early poems of Milton and Marvell.

331. English Literature, 1660-1744. (S.I) *Fall* (3) Mr. Maccubbin.

A survey including poetry fiction, and drama. Some attention to opera and other arts related to literature. Emphasis on comedy and satire. Major figures studied include Swift, Pope, Gay, Fielding, and Hogarth.

332. English Literature, 1744-1798. (S.I) *Spring* (3) Mr. Maccubbin.

A survey including poetry, fiction, and drama. Special attention to the cultural milieu and the development of "sensibility". Major figures studied include Johnson, Gray, Sheridan, Goldsmith, Sterne, Burns, and Blake.

341. The English Romantic Period. (S. I) *Fall* (3) Mr. Elliott.

A survey of the dominant ideas and conventions of English romanticism as expressed primarily through the major poets and essayists of the period between 1798 and 1832.

342. The Victorian Age. (S. I) *Spring* (3) Mr. Meyers.

A survey of the major writers of England during the reign of Victoria. Emphasis is upon

ENGLISH LANGUAGE AND LITERATURE

the social and intellectual issues as expressed primarily by leading poets and essayists from Carlyle to Hardy.

352. Twentieth Century British Literature. (S. I) *Fall and Spring* (3) Mr. Heacox, Mr. Meyers and Mr. Willis.

A survey of British writing from the end of the Victorian era through the modernist period of the 1950's. Selected works by such writers as Conrad, Yeats, Joyce, Lawrence, Woolf, and Thomas are emphasized.

361. American Literature to 1836. (S. II) *Fall* (3) Mr. Wenska.

A survey of American literature from its beginnings to Cooper and Poe, emphasizing the cultural backgrounds of such writers as Bradstreet, Taylor, Franklin and Edwards, and assessing the achievements of early novelists like Foster, Rowson, Brown, and Brackenridge.

362. The American Renaissance. (S. II) *Fall and Spring* (3) Mr. Davis, Mr. Meyer, and Mr. Scholnick.

A survey of American writing in the mid-nineteenth century, emphasizing the writers of the "Concord Group," Hawthorne, Melville, Whitman, Dickinson and the Southwest Humorists.

363. American Literature, 1865-1920. (S. II) *Fall and Spring* (3) Mr. Davis, Miss Nettels, and Mr. Scholnick.

A survey of American literature from the "Gilded Age" to the end of the First World War, emphasizing such writers as "Mark Twain," Howells, James, Stephen Crane, Norris, Dreiser and the Regionalists.

364. American Literature since 1920. (S. II) *Fall and Spring* (3) Mr. Dolmetsch, Mr. Donaldson, Mr. Meyer, Miss Nettels, and Mr. Scholnick.

A survey of American literature from the rise of the "Lost Generation" and the Southern Renaissance to the present, emphasizing such writers as Hemingway, Fitzgerald, Faulkner, Steinbeck, Frost, O'Neill and later dramatists.

***401, 402. Seminar in Creative Writing.** *Fall and Spring* (3, 3) Mr. Klappert.

Intended for the student who has demonstrated some talent for creative writing. He is encouraged to develop his individual interests and creative capacities. Extensive practice in the several types of writing. Consent of instructor required for enrollment.

403. History of the English Language. (S. IV) *Fall* (3) Mr. Southard.

A study of the history of the English language from Anglo-Saxon to the present. Some attention is given to American English and other variants.

404. Modern Grammar. (S. IV) *Fall* (3) Mrs. Reed.

This introduction to transformational-generative grammar investigates the structures and operations underlying sentences currently accepted by speakers of English. The course focuses on one linguistic model, with attention given to linguistic theory, alternative models and issues in syntax and semantics.

405. Descriptive Linguistics. (S. IV) *Fall* (3) Mr. Southard.

A study of contemporary linguistic theory and the methods of language analysis, with emphasis on the examination of language data drawn from a wide variety of languages. Topics such as language acquisition, psycholinguistics, and sociolinguistics are touched upon. Same as Anthropology 430. Prerequisite: One linguistics course or consent of instructor.

406. Historical Linguistics. (S. IV) *Spring* (3) Mr. Southard.

A study of the principles, methods and major results of historical reconstruction, emphasizing Indo-European languages but with some attention to non-Indo-European as

ENGLISH LANGUAGE AND LITERATURE

well. Same as Anthropology 440. Prerequisite: English 211 or 405 (Anthropology 430) or consent of the instructor.

408. Theory of Literature. (S, I, II or III) Spring (3) Mr. Heacox.

A study of the major attempts to identify and define the nature of literature, our responses to it, and its relation to life and to the other arts. The emphasis will be on modern and contemporary literary theory, but with some concern for the historical tradition.

409. Old English. (S, I, IV) Fall (3) Mr. Davidson.

An introduction to Old English, including elementary grammar and phonology and the reading of prose and short poems; collateral readings in the history and culture of the period. Not offered in 1977-78.

410. Beowulf. (S.I) Spring (3) Mr. Davidson.

An intensive study of the text in Old English, with the aim of understanding *Beowulf* as a great work of literature. Emphasis is placed on the structure and the themes of the poem. Collateral readings in recent criticism. Prerequisite: English 409. (Not offered in 1977-78.)

413. Chaucer. (S. I) Fall (3) Mr. Davidson.

A study of *The Canterbury Tales* and *Troilus and Criseyde* as expressions of Chaucer's art. Emphasis is placed on the narrative and dramatic features of the poetry as vehicles for the presentation of medieval attitudes and themes.

421. Shakespeare. (S. I) Fall (3) Mr. Fehrenbach.

A study of the major history plays, including consideration of Renaissance political theory, and of the forms and conventions of Shakespearean comedy. Primarily lecture.

422. Shakespeare. (S. I) Spring (3) Mr. Fehrenbach.

A study of approximately twelve tragedies, with emphasis on Shakespeare's development as a verse dramatist. Special attention is given to the nature of tragedy. Primarily lecture.

426. Milton. (S. I) Spring (3) Staff.

A study of the major poetry and prose, with emphasis on *Paradise Lost* and the theological and literary traditions behind the poem. Lecture and discussion sections.

429. English Renaissance Drama. (S, I) Fall (3) Mr. McCulley.

A study of drama in England, including conventions and currents of ideas, from the origins to the closing of the theatres in 1642, with emphasis on the works of Christopher Marlowe, Ben Jonson and John Webster. Not offered in 1977-78.

435. Epic and Romance. (S. I, III) Fall (3) Mr. Wiggins.

A study of the development of these major genres, with illustrative works drawn from ancient, Medieval and Renaissance, as well as English and Continental authors. Same as Comparative Literature 301.

436. The World Novel. (S. III) Spring (3) Miss Epstein.

A study of selected works of fiction primarily by European and non-Western authors from the eighteenth century to the present. Same as Comparative Literature 302.

439. English Novel to 1832. (S. I) Fall (3) Mr. Smith.

The English novel through Jane Austen, with emphasis on the social, intellectual, and literary influences on its development and on Defoe, Richardson, Fielding, Sterne, and Austen as principal figures.

440. English Novel, 1832-1900. (S. I) Spring (3) Mr. Smith.

Novels by Charlotte and Emily Brontë, Thackeray, Trollope, Dickens, Eliot and Hardy

ENGLISH LANGUAGE AND LITERATURE

are studied as primary examples of the nature and development of the English novel during the Victorian period.

451. Modern Poetry. (S. I, II) Spring (3) Mr. Willis.

Modern English and American poetry and its development, with reading, interpretation and discussion of the verse of Yeats, Pound, Eliot, Auden, Stevens, Thomas, and others.

452. Modern Fiction. (S. I, II) Fall and Spring (3) Miss Hill and Miss Nettels.

Reading, analysis and discussion of the principal American and British fiction writers from 1890 to the present, chosen to illustrate contemporary tendencies in matter and technique.

454. Modern Drama. (S. I, II, III) Spring (3) Mr. McCulley.

Development of modern English and American drama: preliminary view of Ibsen, Strindberg and Chekhov; discussion of plays by Wilde, Shaw, Synge, Yeats, Eliot, Beckett, Pinter, O'Neill, Miller, Williams, Albee and others; attention to content and dramatic method.

460. Black Literature in America. (S. II) Fall (3) Miss Harris.

A study of selected works by the leading Black American writers, with emphasis upon their ethnic concerns and their contributions to the general development of American literary culture. Prerequisite: one course in American literature. Not offered in 1977-78.

‡465. Special Topics in English. Fall or Spring (3) Staff.

Intensive exploration at an advanced level of a limited topic in English, American or international literature or in the relations between literature and other disciplines. Topics to be offered will be announced in the spring of the year before that in which they are to be scheduled. Consent of the Department Chairman required for enrollment.

‡475. Seminar in English. Fall and Spring (3) Staff.

A study in depth of a limited literary topic. Students write and present research papers for a critical discussion. Non-concentrators may enroll upon consent of the Department Chairman. Strongly recommended for students who may plan further formal literary study.

‡480. Independent Study in English. Fall or Spring (3) Staff.

A tutorial course on a topic agreed upon by the student and instructor and approved in advance by a departmental committee. Open only to concentrators who have completed at least half of the concentration requirements.

HONORS STUDY

494. Junior Honors Seminar. Spring (3) Mr. Fehrenbach.

A study in depth of a limited literary topic, emphasizing student discussion and the preparation of critical papers. This course is restricted to concentrators planning to enroll in Senior Honors. Students are admitted by the departmental committee in honors.

‡495-496. Honors. Fall and Spring (3, 3) Staff.

Students admitted to Honors Study in English will be enrolled in this course during both semesters of their senior year. The course comprises (a) supervised reading in the field of the student's major interest; (b) the preparation and presentation by April 15 of an Honors Essay based on the student's own research upon a topic approved in advance by the departmental Honors committee; and (c) satisfactory performance in a comprehensive oral examination in the field of the student's major interest. Students who have not completed 494 may be admitted only under exceptional circumstances.

FINE ARTS

GRADUATE PROGRAM

The department offers the degree of Master of Arts. For degree requirements, and a full description of graduate courses in English, write to the Director, Graduate Study in English for a Graduate Catalog.

Fine Arts

ASSOCIATE PROFESSOR CHAPPELL (*Chairman*), PROFESSORS NEWMAN and ROSEBERG. ASSOCIATE PROFESSORS KORNWOLF, COLEMAN and HELFRICH. ASSISTANT PROFESSOR JACK. INSTRUCTOR BARNES. LECTURERS HOUGHLAND, WINTER and HOOD.

There are two concentrations in the Department of Fine Arts: the History of Art and Studio Art. In each concentration, the student is required to complete F.A. 111, 112 and F.A. 201, 202. It is to the advantage of the student, particularly those concentrating in Studio Art, to have completed these courses by the end of the sophomore year.

A wide variety of programs can be developed from the offerings of the Department to suit the individual needs of concentrators. Students in Fine Arts have developed careers in art, architecture, art history, museum work, teaching, and public communications. Students interested in secondary school teaching of art should elect the concentration in Studio Art. All members of the Department are ready to offer advice on career plans in Fine Arts.

REQUIREMENTS FOR CONCENTRATION

The History of Art requirements are designed to give the student a satisfactory program having breadth, balance, and variety. Students concentrating in the History of Art are required to take F.A. 111, 112 and F.A. 201, 202. In addition to these twelve hours, the student must choose six hours in each of the following three fields:

- A. Medieval Art and Oriental Art.
- B. Renaissance and Baroque Art and Architecture.
- C. Modern Art and Architecture.

An additional six hours must be taken in courses of the student's choice.

The Studio Art program is designed to offer the concentrator a variety of courses and the opportunity to work in depth at an advanced level. Concentrators in Studio Art are required to take F.A. 111, 112, F.A. 201, 202; eighteen additional studio credits, of which at least six credits must be at the 400 level; and six additional credits in the History of Art.

AREA AND SEQUENCE REQUIREMENTS

Area I requirements may be satisfied by F.A. 111, 112 or by F.A. 201, 202.

Sequence requirements may be satisfied by six hours in Fine Arts 307, 308; Fine Arts 401, 402, 403, 404; Fine Arts 405, 406, 453, 454; Fine Arts 451, 452; any combination of Fine Arts 408, 409, 410, 411; Fine Arts 309, 310, 311, 312; Fine Arts 313, 314; Fine Arts 315, 316; Fine Arts 317, 318; Fine Arts 321, 322; Fine Arts 323, 324, or by six hours of interrelated upper level History of Art courses approved by the chairman of the Department.

150. Freshman Seminar. (3) Mr. Chappell.

An introduction to art and architecture through discussions of media, techniques, artists, and art criticism. Not offered in 1977-78.

201. Survey of the History of Art. (A) *Fall and Spring* (3) Mr. Newman and Mr. Kornwolf.

The study of Ancient and Medieval Art. Illustrated lectures and readings.

FINE ARTS

202. Survey of the History of Art. (A) *Fall and Spring* (3) Mr. Newman.

The study of Western Art from the Renaissance to the Present. Illustrated lectures and readings.

307. Modern Art. (S) *Fall* (3) Mr. Kornwolf.

History of earlier Modern Art, c. 1780-1880, in Great Britain, France, Germany, and the United States. Emphasis is placed on the influence of the cultural, social, and industrial revolutions on the major movements of the period—Romanticism and Realism.

308. Modern Art. (S) *Spring* (3) Mr. Kornwolf.

A History of later Modern Art, c. 1880-1970, in Europe and the United States. The continuing influence of the cultural, social, and industrial revolutions on the major movements of the period is given emphasis—the origins of Modernism, its emergence c. 1905-1914; and its demise since 1960.

401. Seminar in Modern Art. (S) *Spring* (3) Kornwolf.

Seminar in Modern Art and Architecture. Readings, discussions, oral presentations, and papers are given on varying topics in Modern Art or Architecture from c. 1780 to the present. Topics are selected by the student in consultation with the instructor. Prerequisites: F.A. 307 or 308 or 402.

402. Modern Architecture and Town Planning. (S) *Fall* (3) Mr. Kornwolf.

A History of Modern Architecture and Town Planning from 1780 to the present in Europe and the United States. Emphasis is placed on the influence of the cultural, social, and industrial revolutions on the major modern movements from Romanticism to the crisis of Modernism.

403. Early Medieval Art. (S) *Fall* (3) Mr. Newman.

A study of certain aspects of Medieval Architecture, Sculpture, and Painting in Early Christian, Byzantine, Barbarian, Carolingian, and Romanesque Art.

404. Late Medieval Art. (S) *Spring* (3) Mr. Newman.

Primary attention is devoted to the development of High Gothic Art and to Late Medieval Painting.

405. Renaissance and Baroque Architecture and Town Planning. (S) *Fall* (3) Mr. Kornwolf.

A History of Architecture and Town Planning in Italy, France, England, Germany, and Spain from c. 1420 to c. 1780. The various architectural interpretations of Classicism and Humanism in each period are given emphasis.

406. Italian Renaissance Art, 1250-1600. (S) *Fall* (3) Mr. Chappell.

The development of the Renaissance in painting and sculpture: its beginnings with Giotto; its flowering with Donatello, Brunelleschi, Ghiberti, and Masaccio; the High Renaissance of Leonardo, Michelangelo, Raphael, Correggio, and Titian; and Mannerism. Possible field trip.

408. Primitive Art. (S) *Fall* (3) Mr. Roseberg.

Study of Art of Primitive People: Pre-Columbian American Art, Northwest American Indian Art, Melanesian and Polynesian Art, African Art, and the Art of Pre-Classical civilizations.

409. Oriental Art, India. (S) *Spring* (3) Mr. Roseberg.

A study of the art culture and religious background of India, including the influence of Indian culture on other Asian countries such as Cambodia, Thailand, Java, and Tibet. (To alternate with F.A. 411).

FINE ARTS

410. Oriental Art, China. (S) (3) Mr. Roseberg.

A study of Art and Architecture of China. (To alternate with F.A. 408).

411. Oriental Art, Japan. (S) (3) Mr. Roseberg.

A study of the Art and Architecture of Japan.

451. Colonial American Architecture. (S) Spring (3) Mr. Newman. Prerequisites: 201, 202, or 405.

452. Colonial American Painting. (S) Fall (3) Mr. Chappell.

American painting from Colonial to Federal Periods; European influence and the development of an American artistic tradition; significant artists such as Smibert, Feke, Wollaston, West, Copley, Peale, Trumbull, and Stuart. College and Colonial Williamsburg collections are resources. Possibly not offered in 1978-79.

453. Northern Renaissance Painting and Sculpture, 1350-1600. (S) Spring (3) Mr. Chappell.

The study of the Renaissance, Mannerism, and indigenous artistic traditions in The Netherlands, France, Germany, and Spain; artists such as Jan van Eyck, Sluter, Roger van der Weyden, Dürer, Grünewald, Breughel, and El Greco. The development of categories such as the portrait, genre scene, the Renaissance tomb. Possible field trip.

454. Baroque Art. (S) Spring (3) Mr. Chappell.

A survey of European painting, sculpture, and printmaking from 1600-1750. The Baroque is traced from its emergence as a reaction to Mannerism through its different developments to the Rococo; emphasis on Caravaggio, Bernini, Rubens, Rembrandt, Hals, Vermeer, and Velasquez. Possible field trip.

457-458. Arts in Colonial Virginia. Fall and Spring (3, 3) Mr. Hood.

Architecture, Archeology and decorative arts of the 17th and 18th centuries in the context of Colonial Virginia, using the staff, facilities, and collections of Colonial Williamsburg as resources. Prerequisite: 201 and 202. Two hours lecture, two hours laboratory.

460. Research Problems in the History of Art. (3) Staff.

Study in depth of a selected topic. May be taken as independent study. May also be offered, on occasion, as a seminar devoted to an aspect of the history of art. Prerequisite: 201, 202, and four additional courses in the History of Art.

495-496. Senior Honors in Fine Arts. Fall and Spring (3, 3) Staff.

Independent study for Honors in the History of Art or in Studio Art. Application information available from the Chairman.

STUDIO ART COURSES

111. Basic Design I. (A) Fall and Spring (3) Staff.¹

Fundamentals of Two Dimensional Design. A series of lectures and studio problems on the elements of two dimensional design, including the illusion of three dimensions on the picture plane, line, shape, texture and color. Six Studio Hours.

112. Basic Design II. (A) Fall and Spring (3) Staff.¹

Fundamentals of Three Dimensional Design. A series of lectures and studio problems

¹A student wishing to be exempted from F.A. 111 or 112 should present to the department chairman a portfolio for review by the instructors of the course which should exhibit the range of experiences covered by the course.

FINE ARTS

dealing with the elements of three dimensional design, including compositions in relief and in the round. Six Studio Hours.

309. Life Drawing I. (S) Fall (3) Mr. Helfrich.

Exploration of various drawing concepts using the human figure. Prerequisites: F.A. 111, 112. Six Studio Hours.

310. Life Drawing II (S) Spring (3) Mr. Helfrich.

Continuation of F.A. 309. Six Studio Hours.

311. Drawing. (S) Fall (3) Mr. Coleman.

The problems of visual understanding and expression in drawing using pencil and charcoal and dealing with line, value, proportion, and perspective mainly through the study of set ups. Prerequisite: F.A. 111 or consent of the instructor. Six Studio Hours.

312. Watercolor. (S) Spring (3) Mr. Coleman.

A course exploring the varied possibilities of watercolor as an expressive medium. Prerequisite: F.A. 111 or consent of the instructor. Six Studio Hours.

313. Architectural Design I. (S) Fall (3) Mr. Houghland.

The Discovery of Architecture through Design, with emphasis on basic design vocabulary: Drafting, Perspective, Shades and Shadows, Scale, and Proportion. Prerequisite: 111, 112, or consent of the instructor. Six Studio Hours.

314. Architectural Design II. (S) Spring (3) Mr. Houghland.

The investigation of the role of architect with specific design problems, and the development of presentation techniques. Prerequisite: 313. Six Studio Hours.

315. Painting I. (S) Fall and Spring (3) Mr. Barnes.

The course examines through paint the relational and emotive forces that constitute the language of visual expression. Emphasis is placed on widening the range of visual awareness through a response while absorbed in the character and reality of experiences. Prerequisites: F.A. 111, 112 or consent of the instructor. Six Studio Hours.

316. Painting II. (S) Fall and Spring (3) Mr. Barnes.

A continuation of painting problems experienced in F.A. 315, stressing the development of a personal response to the nature of things. Prerequisites: F.A. 315 or consent of the instructor. Six Studio Hours.

317. Sculpture I. (S) Fall (3) Mr. Roseberg.

A course in the use of the sculptor's tools and materials in the production of original work, including modelling in clay, plaster casting, direct building in plaster. Five specific sculpture problems are to be completed during the course or during both semesters. Prerequisite: 111, 112 or consent of the instructor. Six Studio Hours.

318. Sculpture II. (S) Spring (3) Mr. Roseberg.

Continuation of 317. Development of original designs from preliminary sketch to completed work. Prerequisite: 317 or consent of the instructor. Six Studio Hours.

321. Beginning Ceramics. (S) Fall and Spring (3) Ms. Jack.

Principles of working with clay. Assignments in handbuilding and wheel-throwing techniques introducing a variety of approaches to the medium. Methods of glazing and various firing processes are also introduced. Students are encouraged to explore different technical approaches as ways to develop their ideas. Prerequisite: F.A. 111, 112 or consent of the instructor. Six Studio Hours.

322. Intermediate Ceramics. (S) Fall and Spring (3) Ms. Jack.

Further exposure and involvement in the firing process. Emphasis is placed on the

GEOLOGY

development of visual ideas and self-expression through clay. Assignments are given as a means of focusing on these goals. *Prerequisite: F.A. 321 or consent of the instructor. Six Studio Hours.*

323. Printmaking: Intaglio. (S) Fall (3) Mr. Helfrich.

Exploration of visual concepts through line etch, drypoint and aquatint. *Prerequisites: F.A. 111, 112 or consent of the instructor. Six Studio Hours.*

324. Printmaking: Lithography. (S) Spring (3) Mr. Helfrich.

Exploration of visual concepts through crayon and tusche on aluminum lithographic plates. *Prerequisites: F.A. 323 or consent of the instructor. Six Studio Hours.*

417. Advanced Sculpture I. Fall (3) Mr. Roseberg.

The student may carve directly in wood or stone (marble or limestone), weld and braze metal sculpture in steel or copper, model small sculptures in wax to be cast in bronze or aluminum, execute large direct plaster constructions or work in plastics. Metal and plastics to be supplied by the student. Course may be repeated. *Prerequisites: F.A. 317-318 or consent of instructor. Six Studio Hours.*

418. Advanced Sculpture II. Spring (3) Mr. Roseberg.

Continuation of 417. *Prerequisite: 417 or consent of the instructor. Six Studio Hours.*

441. Advanced Studio I. (3) Staff.

Advanced work in all media. May be repeated. *Prerequisite: Two 300 courses in one media. Six Studio Hours.*

442. Advanced Studio II. (3) Staff.

Advanced work in all media. *Prerequisite: 441 or consent of the instructor. May be repeated Six Studio Hours.*

All work produced by the students of the studio classes remains the property of the College of William and Mary until released by the appropriate faculty member in charge. The College will not be responsible for theft or damage to such works.

Geology

PROFESSOR CLEMENT (*Chairman*). PROFESSORS BICK, GOODWIN and JOHNSON. ASSISTANT PROFESSOR BENHAM.

The program of the Department of Geology is designed to provide each concentrator with a strong, broad background in geology and yet is sufficiently flexible to allow a student freedom to follow his or her own interests. This is accomplished by requiring every concentrator to take a core of six courses and then providing an opportunity for each student to choose the remaining three courses which comprise his concentration. Ample opportunity is available for independent student research and the department considers such research to be an integral part of its curriculum.

The geologic setting of Williamsburg enhances the program in geology and offers a wide variety of areas for field studies. Situated on the Coastal Plain with its excellent exposures of sediments and fossils, the College is only fifty miles from the fall line beyond which occur igneous and metamorphic rocks of the Piedmont. The Blue Ridge and Valley and Ridge areas are within a three hour drive. Thus the field study area includes all major rock types and representatives of most geologic periods from Precambrian rocks to modern sediments.

REQUIREMENTS FOR CONCENTRATION

A concentration in Geology requires a minimum of thirty-three semester hours of

GEOLOGY

courses in Geology beyond Geology 103, 104. A concentrator's program consists of two parts:

- 1) A core of six courses totaling twenty-four hours which must be taken by all concentrators. These six courses are: Geology 201, 202, 301, 302, 401 and 402.
- 2) Three additional courses totaling nine hours which may be selected from among the following courses: Geology 303, 304, 306, 309, 403, 404, 405, 406 and 407.

Geology courses which will not be counted toward the concentration are Geology 101, 102, 103, 104, 305, 307 and 308.

Both the BA and BS degrees will be granted. In order to qualify for the BS, in addition to the above program a student must satisfy the general catalog requirements for the BS.

It is strongly recommended that a student who wishes to pursue geology on the professional level take the following courses: Geology 403, Physics 101, Chemistry 103, 102, and Mathematics 111, 112. Graduate schools also usually require a reading knowledge of French, German or Russian.

Geology 101-102 or permission of instructor is required for all 300 and 400 level Geology courses.

DESCRIPTION OF COURSES

101-102. Earth Processes. (A) *Fall and Spring* (3, 3) Mr. Benham and Mr. Goodwin.

Processes of the hydrologic and rock cycles, and their influence on the composition, structure, and evolution of the earth. Voluntary field trips. *Three Class Hours.*

103-104. Earth Processes Laboratory. *Fall and Spring* (1, 1) Staff. Prerequisite or Corequisite: Geology 101-102, or permission of the Instructor. Limited to freshmen or sophomores, except by permission of the Chairman. 103 must precede 104.

Laboratory studies of geology including rocks, minerals, topographic maps, geologic maps, and interpretation of earth processes and geologic history. Field trips.

150. Freshman Colloquium. *Fall or Spring* (3) Mr. Benham.

Various special topics in Geology. This course does not count toward concentration, area, or sequence requirements. Weekend field trip required.

201. Mineralogy. (S) *Fall* (4) Mr. Clement. Prerequisite: Geology 103-104 or permission of the instructor.

An introduction to crystal chemistry and crystallography. Identification of common minerals by their physical properties. Introduction to X-ray diffraction and petrographic techniques. *Three Class Hours, Three Laboratory Hours.*

202. Igneous and Metamorphic Petrology. (S) *Spring* (4) Mr. Clement. Prerequisite: Geology 201.

Mineral and rock genesis in the igneous and metamorphic environments. A study of hand specimens and thin sections, structures, textures, and areal distribution. Field Trips. *Three Class Hours, Three Laboratory Hours.*

307. Physical Geography. *Fall* (3) Mr. Bick.

An introduction to physical geography. Topics include earth-sun relationships, energy balance, atmospheric and oceanic circulations, weather elements, climates, and geomorphic processes. May not be taken for graduate credit

309. Contemporary Geology: A Global Approach. (S) *Spring* (3) Mr. Bick. Prerequisite: Geology 102 or permission of instructor.

Major geological and geophysical aspects of the contemporary earth and their relationship to plate tectonics.

GEOLOGY

301. Sedimentary Petrology. (S) Spring (4) Mr. Benham. Prerequisite: *Geology 302* or permission of the instructor.

The petrology of sedimentary rocks including the formation, transport, deposition and post-depositional aspects of sediments. Interpretation of sedimentary rocks utilizing hand specimens, field relationships, thin-sections and quantitative laboratory techniques will be stressed. *Field Trips. Three Class Hours, Three Laboratory Hours.*

302. Paleontology. (S) Fall (4) Mr. Johnson. Prerequisite: *Geology 202* or permission of the instructor.

The taxonomy of fossil organisms and the role of fossils in the study of organic evolution and the time relations of rock sequences. The laboratory stresses invertebrate morphology and quantitative measurement of local marine fossils. *Field Trips. Three Class Hours, Three Laboratory Hours.*

303. Geology of the United States. (S) Fall (3) Mr. Bick.

Descriptive treatment of the major aspects of the geology of the physiographic regions of the conterminous United States. Major emphasis is on the stratigraphy, structure, and development of each region. Two weekends will be devoted to field trips.

304. Geomorphology. (S) Fall (3) Mr. Benham.

A descriptive and quantitative study of landform evolution and modification with respect to climate, drainage basin analysis, soils, and weathering. Attention will be paid to the development of current ideas and interpretation of aerial photographs and maps.

305. Environmental Geology. (S) Spring (3) Mr. Johnson.

An introduction to the causes and extent of air and water pollution, and to methods of preventing, reducing, or eliminating problems relating to ground and surface water, air, and solid waste. *Field trip required.*

306. Marine Geology. (S) Fall (3) Mr. Benham.

An introduction to the history and development of concepts relating to the physical processes acting in the marine environment today. The impact of man will be emphasized. Individual concepts are to be integrated into the broader ideas of oceanic circulation patterns and plate tectonics. (Not offered in 1977-78)

308. Economic Geology. (S) Spring (3) Mr. Goodwin.

The origin, distribution, production, utilization and economics of metallic and nonmetallic mineral resources.

310. Regional Field Geology. As required (1) Staff. Prerequisites: *Geology 102* and permission of the Instructor.

Field study of the stratigraphy, structure, geomorphology, paleontology, economic geology and geologic history of selected physiographic regions of the United States. *Major field trip.*

401. Structural Geology. (S) Fall (4) Mr. Goodwin. Prerequisite: *Geology 301* or permission of instructor.

Theoretical, experimental, and field study of deforming forces and their effects on earth materials. *Field Trips. Three Class Hours, Three Laboratory Hours.*

402. Historical Geology. (S) Spring (4) Mr. Bick. Prerequisite: *Geology 401* or permission of instructor.

The principles of geologic historical reconstruction. Emphasis is on stratigraphic principles and synthesis with examples from the United States. *Three Class Hours, Three Laboratory Hours.*

GEOGRAPHY

403. Quantitative Geologic Models. (S) Fall (3) Mr. Bick.

The probabilistic basis of geologic processes and its application to geologic hypotheses through quantitative testing of conceptual models. (Not offered 1977-78)

404. Paleocology. (S) Spring (3) Mr. Johnson. Prerequisite: Geology 302 or permission of instructor.

The study of the relationship between fossil organisms and the interpretation of ancient environments from the fossil record. *Field Trips. Two Class Hours, Three Laboratory Hours.*

405. Petrography. (S) Fall (3) Mr. Clement. Prerequisite: Geology 202.

An introduction to the theory and use of the polarizing microscope. *Two Class Hours, Three Laboratory Hours.*

406. Independent Research. Fall or Spring (3) Staff.

A course for seniors affording an opportunity for individual research under the supervision of a faculty member. The research project should have the approval of the appropriate faculty member before registration.

407. Senior Seminar. Spring (3) Mr. Goodwin. (Not offered 1977-78)

Discussions and readings on contemporary problems in geology. When possible problems will be studied in the context of the Appalachian Mountain system.

495-496. Honors. Fall and Spring (3, 3) Staff.

Students admitted to Honors Study in Geology will be enrolled in this course during both semesters of their senior year. The requirements include a program of research in geology accompanied by readings from the original literature, the satisfactory completion of a comprehensive examination in Geology, and the preparation and presentation of an Honors Essay based on the student's reading and research. Hours to be arranged.

Geography

Those interested in geography can prepare themselves for further study in the field by selecting suitable courses from among the following while concentrating in a discipline allied to geography:

Physical Geography

- Geology 307—Physical Geography
- Geology 305—Environmental Geology

Economic Geography

- Anthropology 304—Primitive Economic Systems
- Geology 308—Economic Geology

Human Geography

- Anthropology 202—Cultural Anthropology
- Anthropology 314—Indians of North America
- Anthropology 417—Tropical Ecology
- Sociology 349—Human Geography

Regional Geography

- Anthropology 323—Native Cultures of South America
- Anthropology 330—Peoples and Cultures of the Caribbean
- Anthropology 331—Peoples and Cultures of Africa
- Anthropology 340—Peoples and Cultures of Insular Southeast Asia
- Anthropology 342—Peoples and Cultures of Mainland Southeast Asia
- Anthropology 344—Peoples and Cultures of Oceania

Government

PROFESSORS HAMILTON (*Chairman*), EDWARDS, GRAYSON, KIM,¹ MORROW and WARD.² ASSOCIATE PROFESSORS BAXTER, LESSNOFF³ and SMITH.⁴ ASSISTANT PROFESSORS ABRAMOWITZ, McCAIN, McGLENNON, RAPOPORT and RIGELMAN. ACTING ASSISTANT PROFESSOR ERNST.

THE GOVERNMENT PROGRAM

The Government concentration consists of forty-two (42) credits of coherently related work selected by the student in consultation with his departmental advisor. Each concentrator must take at least thirty (30) hours of work in Government, including Government 201 and 202 and a minimum of three (3) hours of course work in each Core Area of the concentration. The four Core Areas are (I) Political Philosophy, (II) Comparative Government and Politics, (III) International Politics, and (IV) American Government, Politics, and Administration. At least three (3) hours of course work must be done at the 400 level. Concentrators are admitted to Honors in Government with the permission of the Department.

The forty-two hours must include Economics 101 and 102 and up to six hours of additional related work in courses specifically approved by the advisor. Related work must be at the 300 or 400 level with the exception of Economics 101-102 and History 201-202. Courses taken on a Pass/Fail basis may not be used as related courses.

It is recommended that concentrators carry their foreign language study beyond the minimum requirements for distribution.

DESCRIPTION OF COURSES

201, 202. Introduction to Government and Politics. (A) *Fall and Spring* (3, 3) Staff.

The first semester is a general introduction to American politics. The second semester is a consideration of such perennial questions of politics as freedom, authority, power, community, and leadership.

491. Topics in Government. *Fall or Spring* (3) Staff.

Selected topics in Government. The topic to be considered will be announced prior to the beginning of the semester.

494. Independent Study. *Fall or Spring* (3) Staff.

A program of independent study, involving extensive reading and the writing of an essay, arranged by the student in consultation with the Department. This course cannot be used to satisfy the 400-level requirement for concentrators in Government. Except under unusual circumstances and with permission of the Department Chairman, students may take Government 494 for credit no more than two times.

Core Area I: Political Philosophy

303, 304. Survey of Political Philosophy. (A,S) *Fall and Spring* (3, 3) Mr. Rigelman, Mr. Lessnoff.

The course is developed around two themes, the classical tradition and the modern tradition in political philosophy. In the first semester the political works of Plato and Aristotle are taken as the standards of the classical tradition. Selected works of medieval Christian writers are also included. Machiavelli and Hobbes define the modern tradition as this is taken up in the second semester. The works of Locke, Rousseau, and Burke complete the course.

¹On leave second semester.

²On leave first semester.

³Visiting, 1977-78.

⁴On leave, 1977-78.

GOVERNMENT

305. Contemporary Political Philosophy. (A,S) *Fall or Spring* (3) Mr. Rigelman, Mr. Lessnoff.

An examination of various approaches to political philosophy from the late nineteenth century to the present.

310. Philosophy of Law. (same as Philosophy 310) (A,S) *Fall* (3) Mr. Rigelman.

A critical examination of the essential concepts and types of arguments used in legal reasoning. The course will examine questions such as: What are the criteria of valid laws? How do laws differ from other social rules? What is the relationship of law to morality? What is the nature and extent of the obligation to obey the law? and What sanctions may the law legitimately impose?

401. American Political Thought. (S) *Fall* (3) Staff.

Basic problems of political theory will be viewed from the perspective of the American experience.

405. Studies in Political Philosophy: Themes and Problems. (S) *Fall or Spring* (3) Mr. Lessnoff, Mr. Rigelman.

An examination of a particular theme or problem such as community, authority, justice, freedom, and utopia.

406. Studies in Political Philosophy: Theorists and Movements. (S) *Fall or Spring* (3) Mr. Lessnoff, Mr. Rigelman.

An examination of the work and significance of a particular great political theorist, group of theorists, or major movement, such as Marxism, Utilitarian Reformism, Conservatism.

412. Empirical Political Theory. (S) *Spring* (3) Mr. Baxter.

A survey of several different approaches to the development of political theory through empirical research. Structured research problems will be used to enable the student to develop facility with the logic and methods of empirical research and to illustrate the relationship of such research to formal theories. Individual research projects will be required.

Core Area II: Comparative Government and Politics

311, 312. Comparative Government. (A,S) *Fall and Spring* (3,3) Miss Hamilton, Mr. Baxter.

A comparative study of institutions and processes of government. Historical, cultural, social and economic factors will be given considerable attention. In the first semester, countries of western Europe will be considered with emphasis on England and France. In the second semester, selected governments of nonwestern nations will be analyzed.

334. Soviet Political System. (A,S) *Fall* (3) Mr. McCain.

A study of the contemporary political system of the Soviet Union with emphasis on potentially dynamic aspects of its socio-economic development as contrasted with the stability of historically determined structural patterns of political control.

335. Comparative Communist Systems (A,S) *Spring* (3) Mr. McCain.

A comparative analysis of political and ideological problems confronting established communist systems in contemporary societies. Special attention will be paid to the growing conflicts between different structures of authority, the role of ideology in a changing environment, and the appearance of dissent.

336. Governments and Politics of China and Japan. (A, S) *Fall* (3) Mr. Kim.

During the first part of the semester, Communist China will be emphasized. After a

GOVERNMENT

survey of the history of Chinese communism, China's political system will be considered with attention given to the role of the leadership, the party, the state, and the military. During the second part of the semester, Japan will be emphasized. Contemporary Japan will be viewed in terms of its political culture with attention given to interest groups, political parties and the process of parliamentary democracy.

337. Politics in Africa. (A, S) Fall (3) Mr. Noisin.¹

A study of selected nations of Africa south of the Sahara. Emphasis will be placed on phenomena such as the rise of nationalism, the development of African party and governmental systems, and the role of Africa in international politics.

338. Latin American Politics and Government. (A, S) Spring (3) Mr. Grayson.

A comparative analysis of the types of government of selected Latin American nations. Appropriate consideration will be given to current conditions and to such problems of general political development as recruitment and socialization, communication and articulation, interest aggregation and decision-making.

410. British Government and Politics. (S) Fall or Spring (3) Mr. Ward. Prerequisite: Government 311 or consent of instructor.

A study of political institutions and political behavior in the United Kingdom. Special attention is given comparisons with the parliamentary democracies of the Commonwealth and the Republic of Ireland.

411. French Government and Politics. (S) Spring (3) Miss Hamilton. Prerequisite: Government 311 or consent of the instructor.

A study of political institutions and political behavior in post-war France. Emphasis will be placed on problems related to political and economic modernization.

416. Revolution and Politics. (S) Fall or Spring (3) Mr. Grayson.

A study of social, political and economic conditions underlying revolutionary change. Careful attention is also given to leadership, organization, coalition-building, propaganda and counterrevolutionary strategies. The French, Russian and Cuban upheavals and Italian Fascism are among the revolutions studied.

431, 432. Comparative Political Systems. (S) Fall and Spring (3, 3) Mr. Baxter. Prerequisite: Government 311, 312 or consent of the instructor.

A comparative approach to the study of politics. First Semester: Scope and methods of comparative political analysis; individual students prepare and present research proposals. Second Semester: Students execute research proposals, present intermediate and final reports.

Core Area III: International Politics

323. International Relations. (A, S) Fall (3) Mr. Ernst.

A study of the theory and practice of international relations. The course will consider the international system of states and the bases of national power.

324. U. S. Foreign Policy. (A, S) Spring (3) Mr. Ward.

A study of American foreign policy with an emphasis on the process of policy formulation. Selected foreign policy problems will be considered.

325. International Organization. (A, S) Spring (3) Mr. Ernst.

A study of the development of the structures and procedures of international organization, and of the methods for pacific settlement of international disputes. Special attention will be given the League of Nations and the United Nations and the gains and failures of these organizations.

GOVERNMENT

327. Africa in International Relations. (A, S) Spring (3) Mr. Noisin.¹

A survey of the factors influencing the foreign policies of African states. Topics will include the non-alignment concept, inter-state conflict and cooperation, Pan-Africanism, and regional integration.

436. Contemporary International Relations of East Asia. (S) Fall or Spring (3) Mr. Kim.

A study of post-war international relations of East Asia. Following a general survey of U.S. relations with East Asia, this course will consider various topics such as post-war U.S.-Soviet rivalry in the Far East, the U.S. role in the democratization of Japan and Korea, the emergence of Japan and the problems of divided Korea. An examination of the Sino-Soviet dispute and the Sino-American detente in the context of triangular relations of Moscow-Peking-Washington will also be undertaken. In addition, the shifting balance of power in East Asia in the era of the post-Vietnam War will be considered.

Core Area IV: American Government, Politics, and Administration

306. Political Parties. (A, S) Spring (3) Mr. Abramowitz.

An examination of the electoral, organizational, and governmental activities of political parties in the American context. Emphasis will be placed on the decline of parties and the consequences of this decline for American democracy.

307. Introduction to Research Methods. Fall or Spring (3) Mr. Rapoport.

An introduction to the methods of empirical political analysis. Topics will include the philosophy of science, research design, concept formation, measurement, hypothesis testing, data analysis, and the logic of casual interpretation.

351. Introduction to Public Administration. (A, S) Fall or Spring (3) Mr. Morrow.

An analysis of behavior and decision-making in public administrative agencies. Emphasis will be placed upon the relationship of the administrative process to organizational structure, politics, and the social environment.

353. The Politics of States and Localities. (A, S) Spring (3) Mr. McGlennon.

An examination of the institutions and processes of government and politics in American states and localities. Relationships among national, state, and local governments will be analyzed in the context of a federal system.

370. The Legislative Process. (A, S) Fall (3) Mr. Abramowitz.

An investigation of the legislative process in the United States with an emphasis on the United States' Congress. Internal and external forces influencing legislative behavior will be examined.

371. The Presidency. (A, S) Fall (3) Mr. Abramowitz, Mr. Morrow.

An examination of the politics and policy influence of the American presidency and other executives. Emphasis will be placed upon the legal and political forces which assign and limit the use of executive power.

372. The Judicial Process. (A, S) Fall (3) Mr. Edwards.

An analysis of the organization and processes of judicial decision-making in the United States, with special emphasis on the U.S. Supreme Court.

373. American Civil Liberties. (A, S) Fall or Spring (3) Mr. Grayson, Mr. Rigelman.

¹Assistant Professor of Anthropology.

GOVERNMENT

An intensive study of the rights of Americans as guaranteed by the Constitution. The changing character of civil liberties problems in the United States will be stressed with attention given to the legal, historical and political context of the cases studied. Class discussion and reports will be emphasized.

374. Political Behavior. (A, S) *Fall or Spring* (3) Mr. Rapoport.

A study of who participates in American politics, how and why they participate. An attempt will be made to assess the effect of this mass participation on the stability, legitimacy, and policymaking of the American political system.

451. Topics in Public Administration. (S) *Spring* (3) Mr. Morrow.

An examination of selected topics and issues in public administration. Such items as public budgeting, policy planning, policy evaluation, personnel management, inter-governmental relations, organizational theory and organizational development will be included.

454. The Politics of Metropolitan Areas. (S) *Fall* (3) Mr. McGlennon. *Prerequisite: Government 351 or 353, or consent of Instructor.*

An examination of the American political system's capacity to confront and solve problems of the nation's urban areas. Historical, economic, and sociological factors affecting the political process in urban areas will be considered.

456. The Development of Public Policy. (S) *Fall or Spring* (3) Mr. Morrow.

A multi-dimensional examination of the factors which combine to develop public policy in the United States. Special attention is given to how public problems are defined, represented, legitimized, administered, and evaluated.

465. Public Opinion and Voting Behavior. (S) *Fall or Spring* (3) Mr. Rapoport.

A study of the relationship between opinions and political policymaking, including the characteristics of political opinions, patterns of voting behavior, and the importance of leadership.

HONORS STUDY

495, 496. Senior Honors. *Fall and Spring* (3, 3) Staff.

Students admitted to Senior Honors in Government will be responsible for (a) readings and discussion of selected materials; (b) satisfactory completion by April 15 of an original scholarly essay; (c) satisfactory performance in a comprehensive examination in the field of the student's major interest.

GRADUATE PROGRAM

The department offers the degree of Master of Arts. For degree requirements, and a full description of graduate courses in government, write to the department chairman for a Graduate Catalog.

History

PROFESSORS SHEPPARD (*Chairman of the Department*), BEYER, COYNER, ESLER, FREEMAN, GOODWYN (HARRISON CHAIR, 1977/78), JOHNSON, MCGIFFERT,¹ SELBY, SHERMAN, and TATE. ASSOCIATE PROFESSORS CRAPOL, EWELL, FOSTER,² FUNIGIELLO, HOAK, MCARTHUR, MCCORD, STRONG, THOMPSON, and WALKER. ASSISTANT PROFESSORS CANNING, MCCOY,³ ROYSTER,³ and WHITTENBURG. LECTURERS CARSON,⁴ CULLEN,⁵ CURTIS,⁵ FIERING, and GILL⁴. ADJUNCT ASSOCIATE PROFESSOR SMITH.⁶

AREA AND SEQUENCE REQUIREMENTS

The normal area-sequence combination is History 101-102 and History 201-202.

Among other satisfactory combinations are: History 101-102 and two upper level European history courses (including Russian and English history), History 201-202 and two upper level American history courses, History 205-206 and two upper level Asian history courses, and History 309-310 and two upper level Latin American history courses.

Permission of the instructor is required for freshmen to enroll in courses numbered 200 and above, and for sophomores to enroll in courses numbered 400 and above.

REQUIREMENTS FOR CONCENTRATION

Concentration in History requires 30 semester credits in history, including History 101, 102, 201 and 202, except that one or more semesters of the preceding courses may be waived by the department chairman upon demonstrated proficiency in European or American history. Students are advised not to limit their junior and senior year courses to those dealing with the history of any one nation. Foreign languages are recommended for students planning to concentrate in history.

DESCRIPTION OF COURSES

EUROPEAN HISTORY

101, 102. History of Europe. (A, S) *Fall and Spring* (3, 3) Staff.

Using European civilization as the point of focus, the course provides a general introduction to the study of history through a discussion of historical methods and problems. First semester centers on the period up to 1715; the second, from 1715 to the present.

150. Freshman Colloquium. *Fall and Spring* (3, 3) Staff.

Topics to be announced.

301, 302. The Ancient World. *Fall and Spring* (3, 3) Mr. Jones.⁷

Ancient Civilization from prehistoric times to the downfall of the Roman Empire. The first semester deals with the ancient Orient and Greece; the second semester with Rome. (Same as Classical civilization 311,312. The course cannot be counted for concentration in history.)

311, 312. Europe in the Middle Ages. (AS) *Fall and Spring* (3, 3) Mr. Freeman.

The origins and nature of Medieval civilization. First semester: the newly forming West and the Roman, German, Byzantine, and Arab influences which worked to create it. Second semester: the aggressive expansion of government, the church, business, and city

¹On leave, 1977-78.

²Visiting Associate Professor, 1977-78.

³Fellow, Institute of Early American History and Culture.

⁴Research Department, Colonial Williamsburg Foundation.

⁵John Marshall Papers.

⁶Museum Operations, Colonial Williamsburg Foundation.

⁷Chancellor Professor of Classical Studies.

HISTORY

life along with the counter-development of restrictive forces that limited their free expansion.

313. Renaissance and Reformation Europe. (AS) *Fall* (3) Mr. Hoak.

A survey of European history from 1400 to about 1648, with particular emphasis on the society of Renaissance Florence; the social and political basis of the Reformation; warfare, science, and discovery; the arts and popular culture. (Not offered 1977-78.)

315, 316. The Age of Absolutism and Revolution in Europe, 1648-1871. (AS) *Fall and Spring* (3, 3) Mr. Sheppard.

An intensive survey of Europe in transition. First semester: 1648-1789, Absolutism, Enlightenment, Enlightened Despotism. Second semester: 1789-1870, Democratic Revolution, Industrialization, and the emergence of the modern state. (315 offered in Fall; 316 not offered 1977-78.)

317, 318. Recent Europe, 1871 to the Present. (AS) *Fall and Spring* (3, 3) Mr. Strong.

First semester: the background to World War I, the course of the war and the collapse of the Central and East European monarchies. Second semester: 1918 to the present, with emphasis on the failure of the Versailles settlement, the rise of Totalitarianism and the Second World War. The course concludes with a discussion of contemporary Europe. (318 offered in Spring; 317 not offered 1977-78.)

319, 320. History of England. (AS) *Fall and Spring* (3, 3) Mr. McCord.

The political social, religious and economic history of England. First semester: Roman occupation through the reign of Elizabeth I; Second semester: 1603 to the present. (Not offered 1977-78.)

321, 322. The History of Russia. (AS) *Fall and Spring* (3, 3) Mr. McArthur.

The political, economic, social and intellectual development of Russia. First semester to 1855. Second semester 1855 to the present.

323, 324. Intellectual History of Modern Europe. (AS) *Fall and Spring* (3, 3) Mr. Esler.

Cultural and intellectual development of the western world from the end of the middle ages to the present. First semester: from the renaissance to the enlightenment. Second semester: the nineteenth and twentieth centuries.

331. History of Spain. (AS) *Fall or Spring* (3) Ms. Ewell.

A social, economic, and political history of Spain from the fifteenth century to the present.

342. The Protestant Reformation and Its Cultural Environment. *Fall* (3) Mr. Pauck.

A study of the Reformation in its political, economic, educational and religious context, including its internal dynamics, its relationship to renaissance humanism, and its response to Roman Catholicism. Attention will also be paid to roots of the Reformation and to the Counter-Reformation. (Same as Religion 339.)

409, 410. England Under the Tudors and Stuarts. (S) *Fall and Spring* (3, 3) Mr. Hoak.

The first semester, 1485-1603; the second semester, 1603-1714.

411. Constitutional History of Medieval England. (S) *Spring* (3) Mr. Freeman.

A study of English constitutional development from the Norman Conquest to the beginning of the Tudor monarchy. Special emphasis will be placed on the royal courts and the common law, restrictions on the king, the effects of war on the constitution, and the place of parliament. (Not offered 1977-78.)

413, 414. The Making of Modern England. (S) *Fall and Spring* (3, 3) Mr. McCord.

An examination of the political, economic, social, and intellectual changes which

HISTORY

explain England's transition from an aristocratic to a democratic society. The course divides in the mid-Victorian period.

433, 434. Modern Germany. (S) *Fall and Spring* (3, 3) Mr. Strong.

First semester: origins and establishment of the modern German state to the collapse of the Second Reich. Second semester; establishment and course of Hitler's Third Reich. (Not offered 1977-78.)

437, 438. History of France, 1648 to the Present. (S) *Fall and Spring* (3, 3) Mr. Sheppard.

First semester, 1648-1815. Intensive examination of a pre-industrial society with special emphasis on social, economic and intellectual problems during the *ancien régime*, Revolution and Napoleon. Second semester, 1815-present. Special attention to social and economic problems as well as to the politics of twentieth-century France. (Not offered 1977-78.)

447. The Crisis of European Society, 1400-1700. (S) *Spring* (3) Mr. Hoak.

Selected aspects of early modern Western society, including (for example) the social and economic foundations of Renaissance culture; poverty, crime, and violence; revolution and rebellion; death, disease, and diet; humanism and reform; witchcraft, magic, and religion; the new cosmography. (Not offered 1977-78.)

471. Contemporary Russia: Selected Problems. (S) *Spring* (3) Mr. McArthur.

The seminar focuses on the Soviet Union, c. 1930-1975. Initial lectures and readings deal with the Stalin period, but the major focus is on continuity and change since Stalin's death. Themes include: dissident intellectuals and the regime, the scientific-technical elite, and the role of foreign relations. (Not offered 1977-78.)

472. The Russian Revolution. (S) *Fall* (3) Mr. McArthur.

The origins, course, and impact of the Bolshevik Revolution. Considerable use will be made of primary materials. A knowledge of the Russian language is not required, but will be utilized when available. (Not offered 1977-78.)

474. Medieval England. (S) *Fall* (3) Mr. Freeman.

Special emphasis will be placed on the period from the Norman Conquest through the fourteenth century, when the English were aggressive abroad and creative at home. The social, economic, political, and military explanations for this expansive period will be examined. (Not offered 1977-78.)

481. History of Physical Science: its origins, Sixth Century B.C. through the Renaissance. *Fall* (3) Mr. McKnight.¹

A study of the Greek and Hellenistic endeavors to explain observed physical phenomena, of Arab science in the Middle Ages, of the revival of academic science during the rise of the European Universities, and Renaissance beginnings of modern physics and astronomy. (Same as Physics 417.) (This course cannot be counted for concentration in History.) (Not offered 1977-78.)

482. History of Physical Science: The Classical Period, 1687-1900. *Spring* (3) Mr. McKnight.

A study of the development of the physical sciences after the publication of Newton's *Principia*. Emphasis will be placed on influences acting on and within the scientific community, on the impact of science on the institutions of society, and on the interrelations between the development of science and that of mathematics and philosophy. (Same as Physics 418.) (This course cannot be counted for concentration in History.) (Not offered 1977-78.)

¹Professor of Physics.

HISTORY

AMERICAN HISTORY

201, 202. American History. (AS) *Fall and Spring* (3, 3) Staff.

The development of the United States. Special emphasis is placed on the period since 1776. The course divides at the year 1877.

201H, 202H. American History. (Honors course.) (AS) *Fall and Spring* (3, 3) Ms. Walker.

Designed to give the student insight into problems of interpretation and methodology, and to acquaint him with the literature of American history. Admission by consent of the instructor.

309, 310. Survey of Latin American History. (AS) *Fall and Spring* (3, 3) Ms. Ewell.

The development of Latin America from Pre-Columbian times to the present. Emphasis is on the inter-action of European, Indian, and African elements in colonial society, the growth of national consciousness, and the related phenomena of political instability and economic underdevelopment.

401, 402. Topics in Modern History. *Fall and Spring* (3, 3) Staff.

A tutorial and seminar at the junior-senior level designed for outstanding history concentrators. Recommended for students intending to pursue graduate study. Admission by consent of the chairman of the department.

403. Colonial and Revolutionary Virginia. (S) *Spring* (3) Mr. Tate.

A specialized study of the founding and development of the Virginia colony with special emphasis on the evolution of its social and political structure.

405, 406. Early American History. (S) *Fall and Spring* (3, 3) Mr. Selby.

Special stress is laid on the nature of the new society in British North America and the development of ideas and institutions which, in the course of the struggle for independence and the formation of the union of states, emerged as a distinctive national culture. The course divides at the year 1763 and concludes with the adoption of the Constitution.

421, 422. The United States, 1815-1877. (S) *Fall and Spring* (3, 3) Mr. L. Johnson.

The origins, development, and outcome of the struggle between the North and South.

423, 424. The United States 1877 to 1945. (S) *Fall and Spring* (3, 3) Mr. Sherman.

The emergence of modern America. Primary emphasis is on domestic developments. Major topics include: the rise of industry, political trends, economic and social reform movements, and the role of ethnic and racial minorities. The course divides around 1920. (424 offered in Fall; 423 not offered 1977-78.)

425. The United States Since 1945. (S) *Spring* (3) Mr. Sherman.

The primary emphasis in this course is on domestic developments since World War II, including political and economic trends, the civil rights movement, and other recent social reform activities.

429, 430. American Constitutional History. (S) *Fall and Spring* (3, 3) Mr. Cullen.

First semester: evolution of the federal constitution from national supremacy and dual sovereignty, with special emphasis upon the constitutional significance of the post-Civil War amendments. Second semester: federal constitutional development in the fields of business regulation, federal-state relations, civil liberties and civil rights. The course divides in 1877. (Not offered 1977-78.)

441. The Caribbean. (S) *Fall* (3) Mr. Beyer.

Within the perspective of a general history of the Caribbean, this course emphasizes the

HISTORY

history of the Spanish islands (Cuba, Puerto Rico, the Dominican Republic) and of the Spanish Main from the late 18th through the 20th centuries.

442. Brazil. (S) Spring (3) Mr. Beyer.

Antecedents of modern Brazil, 1500-present, with accent on economic, social, and cultural factors as well as on political growth in the Portuguese colony, the Empire, and the Republic.

443, 444. History of American Foreign Policy. (S) *Fall and Spring* (3, 3) Mr. Crapol.

The formulation and development of American foreign policy from 1775 to the present. The emphasis is on the domestic and international forces which have shaped American foreign policy. Special attention is given to the problems involved in the planning and execution of foreign policy. First semester: 1775 to 1899. Second semester: 1899 to 1945. (443 offered in Spring; 444 not offered 1977-78.)

445. History of American Foreign Policy in the Cold War Era. (S) *Fall* (3) Mr. Crapol.

An intensive analysis of the origins of the cold war, the policy of containment, global conflict since 1945, the strategy of foreign aid, and the ideological contest in the underdeveloped world.

446. America in the Early National Period, 1789-1815. (S) *Fall* (3) Mr. Whittenburg.

The course emphasizes the position of the United States as a new nation and traces the developing character of American political culture in the Federalist and Jeffersonian periods. (Not offered 1977-78.)

453, 454. American Intellectual History. (S) *Fall and Spring* (3, 3) Mr. McCoy, Mr. Thompson.

A study of American thought and culture from colonial times to World War Two. The semesters break at the Civil War.

459. Problems in Modern History. (S) Spring (3) Mr. Goodwyn, James Pinckney Harrison Professor of History, 1977-78.

Topic: The Insurgent South. A study of Reconstruction, Populism, and the Civil Rights Movement which will examine all of southern culture.

461, 462. American Social History. (S) *Fall and Spring* (3, 3) Staff.

History 461 focuses upon colonial Williamsburg as a resource for the study of early American social history. History 462 emphasizes the social history of the nineteenth and twentieth centuries.

463. The Old South. (S) *Fall* (3) Mr. Coyner.

The American South from its colonial origins to secession, including, as major topics, the structure of society, the economy, slavery, the growth of Southern sectionalism and the Southern mind.

464. The Emergence of the New South Since 1865. (S) Spring (3) Ms. Walker.

A survey of the political, economic, and social developments in the South since the Civil War. The course will examine Reconstruction, the Bourbon regimes, Populism, racism, progressivism, the depression, the New Deal, and post World War II conditions. (Not offered 1977-78.)

466. The Negro in the United States Since 1861. (S) Spring (3) Ms. Walker.

An examination of the role of the black man in American society from the Civil War to the present. The course will consider political, economic, and social developments within the black community, as well as problems of black-white relations.

476. The Rise of Urban America. (S) *Fall* (3) Mr. Funigiello.

HISTORY

The American city from the colonial period to the present; political and economic institutions, social change, technological innovations, planning theories, and the reactions of sensitive observers to the process of urbanization as expressed in imaginative literature and scholarly studies.

477. History of Mexico. (S) Spring (3) Ms. Ewell.

Development of the Mexican nation from the Spanish conquest to the present. Sequential treatment of the interaction of Spanish and Indian cultures, expansion of the frontier, independence, 19th century liberalism and caudillism, the Mexican Revolution of 1910 and its institutionalization.

479. Social and Intellectual History of Latin America. (S) Fall (3) Ms. Ewell.

Survey of Latin American society and thought from the sixteenth to the twentieth century. The study of English translations of primary sources (novels, histories, essays, poetry, journals) will illustrate the relationship between society and the intellectual in Latin American history. (Not offered 1977-78.)

ASIAN HISTORY

205, 206. Survey of East Asian Civilization. (AS) Fall and Spring (3, 3) Mr. Canning.

A general political and cultural history of China, Japan, Korea and Vietnam from ancient times to the present.

483. Modern Japanese History. (S) Fall (3) Mr. Canning.

A history of Japan from the Tokugawa era to the present with a special emphasis on the 19th and 20th centuries. Recommended: History 205 or 206, equivalent course work or consent of instructor.

484. Modern Chinese History. (S) Spring (3) Mr. Canning.

A history of China from the mid-Ch'ing (18th century) to the present as seen through primary sources (in translation), literature, and current historical writing. Recommended: History 205 or 206, equivalent course work or consent of the instructor.

HISTORIOGRAPHY

493. Studies in Historiography. (S) Spring (3) Ms. Ewell.

Seminar in historical methods and problems. A study of selected historians and schools of historical thought. Limited to juniors and seniors. *Prerequisite, 12 hours in history or consent of the instructor (where a qualified candidate lacks 12 hours credit in history).*

HONORS STUDY

495, 496. Honors. Fall and Spring (3, 3) Staff.

Students admitted to Honors Study in History will be enrolled in this course during both semesters of their senior year. Each candidate will be responsible for (a) reading and discussion of a selected list of books in some specific area of historical literature; (b) a scholarly essay by April 15; (c) a comprehensive oral examination. Admission by consent of department chairman.

THE JAMES PINCKNEY HARRISON CHAIR OF HISTORY

The generosity of Mrs. James Pinckney Harrison and her son, Mr. James Pinckney Harrison, Jr., has enabled the College to establish an endowed chair in History in honor of James Pinckney Harrison, Sr. The purposes of this endowment are explained by the donors as follows:

The James Pinckney Harrison Chair of History is established to encourage the study of

INTERDISCIPLINARY STUDY

history as a guide for the future, as a field of absorbing interest and pleasure, and as a source of the wisdom, charm and gentility exemplified by James Pinckney Harrison. Born in Danville in 1896, he spent much of his life until his death in 1968 in Charles City County, not far from "Berkeley," his ancestral home. Far-ranging travels for business and country led him to an appreciation of many cultures of the world, but also strengthened his love and commitment to Virginia. As Chairman of the Board of Universal Leaf Tobacco Company of Richmond for many years, James Pinckney Harrison served in many civic, philanthropic and business affairs, ever enriching the life of those around him.

GRADUATE PROGRAM

The department offers the degrees of Master of Arts and Doctor of Philosophy. For degree requirements, and a full description of graduate courses in history, write to the department chairman for a Graduate Catalog.

In addition to traditional preparation in teaching and research, the Department of History, in conjunction with the Institute of Early American History and Culture, the Earl Gregg Swem Library, the Department of Anthropology and Southside Historical Sites, Inc., the Virginia Research Center for Archaeology, and the Colonial Williamsburg Foundation, offers a unique opportunity for students in the master's and doctoral programs to obtain practical experience in other career fields related to history. Apprenticeships for master's and first-year doctoral students and internships for advanced doctoral students are available in *archives and manuscript collections*, the *editing of historical books and magazines*, *historical archaeology*, and the *interpretation and administration of historical sites*.

INTERDISCIPLINARY STUDY

The curriculum of the Faculty of Arts and Sciences provides for interdisciplinary concentrations. A student formulates an interdisciplinary concentration in consultation with a faculty advisor, subject to approval by the Committee on Interdisciplinary Study. Among the programs available for interdisciplinary concentrations, for example, are *Comparative Literature*, *Linguistics*, *Black Studies*, *Medieval Studies*, *Latin American Studies*, *Environmental Studies*, *Asian Studies* and *Urban Studies*. Programs are submitted to the Committee on application forms which are available from the office of the Dean of Students.

All interdisciplinary programs must be compatible with the degree requirements of the Faculty of Arts and Sciences. No concentration may exceed 42 hours or be less than 30 hours. The responsibility for formulating a sound academic program of interdisciplinary study lies with the individual student and the advisor. Normally, each student pursuing an interdisciplinary concentration bases his program upon a solid understanding of and proficiency in one of the established disciplines.

495-496. Interdisciplinary Honors. (3, 3)

Students admitted to Interdisciplinary Honors will be enrolled in this course during both semesters of their senior year. Each candidate will be responsible for (a) formulating a program of study in consultation with a faculty advisor; (b) preparation and presentation by April 15 of an honors essay; (c) satisfactory performance in a comprehensive oral examination which focuses on the subject matter of the honors essay.

Mathematics and Computer Science

PROFESSORS O'NEIL (*Chairman*), CATO, REYNOLDS and SOUTHWORTH. ASSOCIATE PROFESSORS BYNUM, CONNER, DREW, FEYOCK,¹ GIBBS, LAWRENCE, NOONAN, POOLE, PROSL, RUBLEIN, SANWAL, STANFORD, and STOCKMEYER.² ASSISTANT PROFESSORS DONEGAN, EASLER, MILLER, RABINOWITZ, SCHAEFFER. SENIOR RESEARCH ASSOCIATE ANDERSEN, ADJUNCT PROFESSOR ORTEGA, ADJUNCT ASSISTANT PROFESSORS KNIGHT and STRAETER.

AREA AND SEQUENCE REQUIREMENTS

The basic college requirement concerning Area 3 may be satisfied in Mathematics by taking any two of the courses Math 106, 107, 111, 112; or by taking C.S. 141 and C.S. 241.

If the basic Area 3 requirement was satisfied by taking two of Math 106, 107, 111, and 112, then the in-depth or sequence requirement may be satisfied by taking any two other courses labeled Mathematics and designated (S) or (AS). Courses labeled C.S. may not be coupled with Math 106, 107, 111, or 112 to satisfy a sequence requirement.

If the basic Area 3 requirement was satisfied by taking C.S. 141 and C.S. 241, then the sequence requirement may be satisfied by taking any additional two courses labeled C.S. and designated (S).

CONCENTRATION PROGRAM

The department's program includes two major tracks: (1) Concentration in mathematics and (2) concentration in computer science.

MATHEMATICS

Mathematics in its abstract form is a study of relationships between objects. As seen by the modern mathematician, it is both the language of reason and a basic tool of the physical and social sciences.

The mathematics program at William and Mary is designed to provide a broad background in various aspects of the subject, with specific sub-programs aimed at preparing students for graduate school in mathematics, science or engineering, for teaching at the elementary and secondary level, or for careers as industrial mathematicians or actuaries.

The basic concentration requirements are:

1. Math 111, 112, 211, 212, 311, 405, 407
2. Twelve additional semester hours chosen from courses labeled Mathematics and numbered above 304.

COMPUTER SCIENCE

Computer Science is the study of computers and the phenomena surrounding them. The discipline is intimately involved with the representation, manipulation and presentation of information. It is also concerned with the organization, application and the theoretical characterization of the properties and limitations of computers. This concentration was developed in order to give students the training necessary to enter graduate school in computer science and to obtain employment as computer professionals. Concentration requirements for this option are as follows:

1. Math 111, 112, 211, 212, 401, 407, and 413, together with one of C.S. 341, Math 342
2. C.S. 141, 241, 242
3. Three more hours chosen from Math 414, 431, 432, C.S. 441, 442, 443.

¹Visiting, 1977-78.

²On leave 1977-78.

DESCRIPTION OF COURSES

103. Algebra-Trigonometry. *Fall* (3) Staff.

A study of the real number system, sets, functions, graphs, equations and inequalities, systems of equations, followed by a study of the trigonometric functions and their properties and a brief introduction to polynomial calculus as a preparation for Math 111. Recommended only for science majors who have a deficiency in their training. This course may not be applied either towards concentration in mathematics or towards satisfaction of college area requirements.

Math 106 and Math 107 are designed to provide the non-science student with an insight into the nature and scope of modern mathematics. A student who successfully completes a mathematics course numbered 211 or higher may not enroll in Math 106 or 107.

106. Fundamental Concepts of Mathematics. (A) *Fall and Spring* (3, 3). Staff.

Main topics are probability and computer programming. As time permits, topics may be chosen from analysis or linear programming.

107. Fundamental Concepts of Mathematics. (A) *Fall and Spring* (3, 3) Staff. Prerequisite: *Math 106*.

Topics include finite structures, graphs and digraphs, modeling, and elementary game theory.

111. Calculus. (A) *Fall and Spring* (3, 3). Staff.

Inequalities, absolute value; functions, limits, derivatives, Mean Value Theorem; maxima and minima problems; related rates; the definite integral and Fundamental Theorem of Integral Calculus; differentiation of exponential functions and logarithm functions.

112. Calculus. (A) *Fall and Spring* (3, 3). Staff. Prerequisite: *Math 111* or equivalent.

Differentiation of trigonometric functions; techniques of integration; applications to areas; volumes, infinite series, Taylor's theorem with remainder, and power series.

211. Linear Algebra. (AS) *Fall and Spring* (3, 3). Staff. Prerequisite: *Math 112*.

An introduction to vector spaces, linear transformations, matrices and determinants; eigenvalues and eigenvectors.

212. Introduction to Multivariable Calculus. (AS) *Fall and Spring* (3, 3). Staff. Prerequisite: *Math 211* or consent of the chairman of the department.

Functions of several variables, surfaces in three-space, vectors, techniques of partial differentiation and multiple integration with applications.

302. Ordinary Differential Equations. (AS) *Spring* (3) Staff. Prerequisite: *Math 211* or consent of the head of the department.

First order differential equations, initial value problems, second order linear differential equations, systems of linear differential equations and Laplace transforms.

304. Linear Programming. (AS) *Spring* (3) Staff. Prerequisite: *Math 211*.

A careful study of algebra for linear programming; simplex method, degeneracy, duality and its interpretations, transportation problems. These models will be applied to models from economics and business.

308. Geometry. (AS) *SPRING* (3) Mr. Reynolds.

Axioms and deductive reasoning; some advanced Euclidean geometry including cross ratio and axiomatic systems; synthetic and coordinate projective geometry; duality; perspectivity; conics.

MATHEMATICS AND COMPUTER SCIENCE

311. Advanced Calculus. (AS) *Fall and Spring* (3, 3) Messrs. O'Neil and Miller. Prerequisite: *Math 212*.

A continuation of *Math 212*. Topics include a brief review of multiple integration and techniques of partial differentiation; line and surface integrals; theorems of Gauss, Green and Stokes; infinite series and uniform convergence; power series; Fourier series.

342. Discrete Structures. (S) *Spring* (3) Staff. Prerequisite: *C.S. 141, Math 211*.

Fundamental algebraic, logical, and combinatorial concepts from mathematics which are needed for advanced work in computer science. (Not offered 1977-78)

344. Combinatorial Analysis. (S) *Spring* (3). Staff. Prerequisite: *Math 211*.

Elementary counting functions, partitions, inversion formulas, Polya's theorem, finite geometries, and Latin squares.

401-402. Probability and Statistics. (S) *Fall and Spring* (3, 3). Messrs. Rabinowitz and Drew. Prerequisite: *Math 212*.

First semester topics include: combinatorial analysis, Bayes' Theorem, discrete and continuous probability distributions and characteristics of distributions. The second semester deals with statistical inference theory and applications including sampling from probability distributions, estimation, hypothesis testing, confidence methods, regression analysis, sequential analysis, and non-parametric statistics.

403-404. Intermediate Analysis. (S) *Fall and Spring* (3, 3) Mr. Bynum. Prerequisite: *Math 311*.

Set theory; the real number system; analysis in metric spaces including continuity and convergence; normed linear spaces; integration and differentiation theory. (Not offered 1977-78).

405. Complex Analysis. (S) *Spring* (3) Mr. O'Neil. Prerequisite: *Math 311*.

The complex plane, analytic functions, Cauchy Integral Theorem and the calculus of residues, Taylor and Laurent series; analytic continuation; conformal mapping and boundary value problems.

407. Abstract Algebra. (S) *Fall and Spring* (3, 3) Messrs. Miller and Stanford. Prerequisite: *Math 211*.

Groups, rings, fields, isomorphism theorems; polynomials; modules. Additional topics chosen from group theory and ring theory, as time permits.

408. Advanced Linear Algebra. (S) *Spring* (3) Messrs. Stanford and Conner. Prerequisite: *Math 211*.

Vector spaces, linear transformations, matrices, determinants, Jordan and other canonical forms, quadratic forms.

410. Special Topics in Mathematics. (S) *Fall or Spring* (1, 2, or 3 credits, depending upon material). Staff.

A treatment of topics of interest not routinely covered by existing courses. Material may be chosen from topology, algebra, differential equations, and various other areas of pure and applied mathematics.

412. Introduction to Number Theory. (S) *Fall* (3) Mr. Reynolds.

An elementary course in the theory of integers, divisibility and prime numbers; a study of Diophantine equations, congruences, number theoretical functions, decimal expansion of rational numbers and quadratic residues.

413-414. Topics in Numerical Analysis. (S) *Fall and Spring* (3, 3). Mr. Poole. Prerequisites: *Math 212* and computer programming.

The topics to be discussed the first semester are roots of equations, solutions of systems

MATHEMATICS AND COMPUTER SCIENCE

of linear equations by matrix methods, eigenvalues and eigenvectors of matrices, interpolation, numerical evaluation of integrals, and numerical differentiation.

The second semester topics include empirical data curve fitting, integration of systems of ordinary differential equations of both the initial value and boundary value type.

418. Foundations of Mathematics. (S) Spring (3) Staff. *Prerequisite:* Phil. 301 or Math 407 or consent of instructor.

This course is jointly listed with Mathematics and Philosophy (Phil. 418), and may be applied toward major requirements in either one of these departments (but only in one). The course will offer a study of naive set theory, some paradoxes which it generates, and a variety of ways of eliminating the paradoxes. A non-naive set theory will be studied through the development of cardinals, ordinals, and the axiom of choice, and some of its equivalents. Some attention will be paid to the Gödel/Cohen work on the axiom of choice and the continuum hypothesis.

421. Continuous Models of Applied Mathematics. (S) Fall (3) Mr. Lawrence. *Prerequisite:* Math 311.

The construction and analysis of continuous models in applied mathematics. Topics will include partial differential equations and their uses in modeling, Fourier analysis, calculus of variations, and special functions.

423. Discrete Models of Applied Mathematics. (S) Spring (3) Mr. Drew. *Prerequisite:* Math 401.

The construction and analysis of discrete models in applied mathematics. Topics will be chosen from linear optimization, flows and networks. Markov chains, queuing problems, inventory problems and growth models.

426. Topology (S) Spring (3) Staff. *Prerequisite:* Math 311 or consent of instructor.

A study of topological spaces, metric spaces, continuity, product spaces, compactness, connectedness, and convergence. As time permits, additional topics may be chosen from homotopy theory, covering spaces, manifolds, and surfaces, or other topics in algebraic or set topology.

431. Mathematical Theory of Finite Automata. (S) Fall (3) Staff. *Prerequisite:* A course in abstract algebra.

An introduction to APL, logical functions and Boolean algebra; the theory of sequential machines and neural nets; the concepts of state- and machine-equivalence; deterministic and non-deterministic finite automata and regular expressions; semi-groups and abstract machines. (Not offered 1977-78.)

432. Introduction to the Theory of Computability. (S) Spring (3) Staff. *Prerequisite:* Math 431.

The notions of effective procedure, algorithm and Turing machine; modifications of Turing machines; Church's Thesis and computability; recursive functions and LISP; other models for general computability and their equivalence; Post's symbol manipulation systems and the normal form theorem.

451. Survey Sampling. Spring (3) Mr. Rabinowitz. *Prerequisite:* An introductory course in Statistics or consent of the instructor.

An introduction to the design and analysis of sample surveys intended for students of business and the social sciences. Topics include simple random sampling, stratified sampling, cluster sampling, systematic sampling and ratio estimation. Practical aspects of survey problems are emphasized using applications to auditing and accounting problems, political and economic polls, sociological studies, psychological experiments and wildlife management. The course is not open to math concentrators. (Not offered 1977-78.)

MATHEMATICS AND COMPUTER SCIENCE

‡495-496. **Honors.** *Fall and Spring* (3, 3) Staff.

Students admitted to Honors Study in Mathematics will be enrolled in this course during both semesters of their senior year. The course comprises:

- (a) supervised research in the student's special area of interest;
- (b) presentation by April 15 of an Honors Thesis; and
- (c) satisfactory performance in a comprehensive oral examination in the field of the student's major interest.

COMPUTER SCIENCE

C.S. 141. Introduction to Computer Science. (A) *Fall and Spring* (3, 3) Staff.

This course is designed to develop an understanding of the fundamental concepts of computer science. Topics include problem solving, algorithms, programming in a higher level language, debugging, characteristics and organization of computers, data structures and fundamentals of programming style. The format of the course is two hours of lecture and one hour of discussion each week. Discussion sections are arranged according to academic interest such as social sciences, physical sciences, mathematics, and business.

C.S. 241. Computer Organization. (A) *Fall and Spring* (4, 4) Staff. Prerequisite: C.S. 141.

This course investigates the organization of computer hardware and software. Topics include hardware organization, number representations, addressing techniques, assembly language, assemblers, loaders, subroutines, coroutines, macros, input/output and auxiliary storage devices and their control by hardware and software, control structure and microprogramming. The laboratory-discussion sessions, in which the more practical aspects of the material can be presented more effectively than in formal lectures, will be concerned with the implementation, in assembly language, of various concepts discussed in the lectures.

C.S. 242. Principles of Advanced Programming. (S) *Fall and Spring* (3, 3). Staff. Prerequisite: C.S. 241.

This course discusses some of the more recently formulated principles of effective programming including structured programming, stepwise refinement and assertion proving as well as the more traditional topics of style, debugging, control structures, decision tables, finite state machines, recursion, and encoding.

C.S. 341. Data Structures. (S) *Fall* (3) Staff. Prerequisite: C.S. 241.

This course is concerned with the concepts of data representation and data structures which are essential to an understanding of the capabilities and limitations of computers. Topics include linked lists, trees, graphs, digraphs, and their associated algorithms. Also included are memory management, sorting, searching, and applications to information retrieval, file management, lexical analysis, and string processing. A higher level programming language will be utilized.

C.S. 342. Operating Systems. (S) *Spring* (3) Staff. Prerequisites: C.S. 242, C.S. 341.

This course discusses the various aspects of a computer operating system including resource allocation, processes, processor allocation, memory management, virtual memory, device management, information management and protection and design approaches. One or more case studies will be discussed.

C.S. 441. Programming Language Design and Implementation. (S) *Fall* (3) Staff. Prerequisite: C.S. 341.

The emphasis in this course is on the basic concepts of programming language design and their implementation. Topics include lexical analysis, block structure, grammars, parsing, program representation and run-time organization.

DEPARTMENT OF MILITARY SCIENCE

C.S. 442. Programming Languages. (S) Spring (3) Staff. Prerequisite: Knowledge of a block-structured language.

A study of programming language design, history and implementation. Topics include data and operations, sequence control, data access control, storage management and operating environment. Possible languages to be studied include FORTRAN, ALGOL, PL1, APL, SNOBOL and COBOL.

C.S. 443. Information Systems. (S) Fall (3) Staff. Prerequisite: C.S. 342.

This course will present the computer related background which is basic to the understanding of the design and analysis of integrated database systems. Topics include functions, organization, structure and analysis of data and communication systems, hardware characteristics of data and communication systems devices, data management systems and examples of integrated database systems.

GRADUATE PROGRAM

The department offers the degrees of Master of Arts and Master of Science. For degree requirements, and a full description of graduate courses in mathematics, write to the department chairman for a Graduate Catalogue.

Department of Military Science

PROFESSOR LTC MILLS (*Chairman*), ASSISTANT PROFESSORS MAJOR GRAHAM and MAJOR YOUNG, CAPTAIN PRATT and CAPTAIN STONE.

A unit of the Reserve Officers' Training Corps was established at the College of William and Mary on July 1, 1947, with an assigned mission to qualify students for positions of leadership and management in the Armed Forces. By participating in the ROTC Program, a student can earn a commission as a 2nd Lieutenant in the Regular Army or the United States Army Reserve, while pursuing his or her degree. A general military science curriculum is offered which enables a cadet to qualify for assignment into any one of the 13 branches of the Army.

WHAT ROTC OFFERS:

1. A minimum of \$2,000 in scholarship-type money to each cadet during his junior and senior years.
2. A job opportunity with a starting salary in excess of \$11,300 per year.
3. A commission as a Second Lieutenant in the United States Army.
4. Extensive leadership and management courses which are applicable to both civilian industry and the military service.
5. An opportunity to participate in such activities as Orienteering, Mountaineering, Survival Training, Marksmanship, and Ranger Training.

Scholarships:

Four-, three-, two-, and one-year Army ROTC scholarships are available to cadets on a competitive basis. The four-year scholarship is available to outstanding high school seniors and is applied for in the junior or senior year. College freshmen, sophomores and juniors who are already participating in the ROTC Program, or who are eligible for placement credit, may apply for three-, two-, and one-year scholarships respectively. The scholarship will pay for the following:

1. Tuition
2. Books
3. Lab Fees
4. \$100.00 per month (tax free)

DEPARTMENT OF MILITARY SCIENCE

In addition, all non-scholarship cadets enrolled in the Advanced ROTC Program receive scholarship-type monies of \$100 per month (tax free) during the junior and senior years with no additional obligation.

Books and Uniforms:

All books, uniforms and materials needed for participation in the ROTC programs are furnished by the Military Science Department at no cost to the student.

Educational Delays:

Newly commissioned officers may delay their entry on active duty in order to pursue graduate studies in a recognized field of endeavor.

Requirements for Commissioning:

4-Year Program:

1. Completion of 3 of the 4 (100 level) courses offered during the freshman and sophomore years. MS 104 is required and during the first two years a cadet must take PE 101 (Orienteering) during one semester in lieu of a 100 level Military Science Course.
2. During the junior year a cadet must take MS 301 and 302.
3. During the summer between the junior and senior years a cadet must attend a 6-week ROTC Advanced Camp.
4. During the senior year a cadet must take MS 401 and 402.

2-Year Program:

1. During the summer, between the sophomore and junior years, a cadet must attend ROTC Basic Camp for 6 weeks.
2. During the junior year a cadet must take MS 301 and 302.
3. During the summer, between the junior and senior years, a cadet must attend a 6-week ROTC Advanced Camp.
4. During the senior year a cadet must take MS 401 and 402.

Requirements for Enrollment:

Any full-time college student who is a citizen of the United States, physically qualified, and not already holding a commission in any of the Armed Forces may, when he matriculates, enroll in Basic Military Science. Those meeting the above qualifications, but who have had prior military experience, whether in the Armed Forces or in another college, or in junior ROTC in high school, may, commensurate with the degree of such experience, enroll in Military Science at a higher level. Transfer students desiring to take advantage of previous military courses should consult the Professor of Military Science when they matriculate. Entrance into the Advanced Course is based upon the following:

1. Achieving junior status.
2. Satisfactory completion of the Basic Course, Basic Camp or advanced placement due to prior service in high school ROTC.
3. Successful completion of an Army physical examination.
4. Execution of appropriate loyalty statements and contractual agreements.
5. Satisfactory completion of the appropriate screening tests.
6. Selection by the Professor of Military Science.

Obligations:

A student incurs no obligation to the military by participating in freshman and sophomore courses. These courses offer a cadet the opportunity to evaluate the prospect of military service and enable him to qualify for the Advanced Program at the beginning of his junior year. When a cadet enters the Advanced Program he is then obligated to accept a commission, if offered, upon graduation.

There are 4 choices normally available to the cadet at graduation.

1. He may enter the service for as little as 90 days (to attend a basic branch school) and

DEPARTMENT OF MILITARY SCIENCE

then serve in the active reserves for a period of 6 years while pursuing his civilian career.

2. He may apply for AD (active duty) USAR, at which time he will serve on active duty for three years and can if he desires, remain on active duty for a military career.
3. If a student is designated a Distinguished Military Student, due to his excellence in both military and academic studies, he may apply for a Regular Army Commission.
4. Scholarship students will serve 4 years on active duty.

DESCRIPTION OF COURSES:

101. Military Science I & II. *Fall* (1) Major Young, Captain Stone.

Phase one presents the theory of the formation and execution of American National Security Policy and will include the use of nuclear weapons ideological and psychological conflict, and the role of the military in national policy. Phase two will be mountaineering. Cadets will learn rappelling and other techniques of mountain operations.

102. Military Science I & II. *Spring* (1) Major Young, Captain Stone.

Phase one will be studies on the basic theory underlying modern revolutionary warfare. Phase two will deal with the subject of patrolling. Learn to plan, organize and conduct patrols by participating in actual patrols.

103. Military Science I & II. *Fall* (1) Major Young, Captain Stone.

Phase one will be studies on the topic of basic leadership and management through the study of leadership principles, and management theory, along with practical exercises. Phase two will be practical in nature and designed to develop basic tactical skills such as planning and controlling squad-sized operations in a tactical environment.

104. Military Science I & II. *Spring* (1) Major Young, Captain Stone.

Phase one will be studies in American Military Development emphasizing the historical growth and development of the American Forces with principal emphasis on military theory and doctrine. Phase two will be practical in nature and will cover techniques of survival.

301. Military Science III. *Fall* (1) Major Graham.

Studies of Advanced Leadership & Management. The scope of the course will cover in detail the decision-making process, situational estimates, military leadership styles, and authority relationships as applied to tactical theory and doctrine.

302. Military Science III. *Spring* (0) Major Graham

Study of general military subjects directed toward the reinforcement of prior military skills and the development of new skills required for Advanced Camp. Subjects covered will be rifle marksmanship & mechanical training, physical training, drill & ceremonies, map reading, and tactics.

401. Military Science IV. *Fall* (1) Captain Pratt

Civil-Military Relations studies. The course presents civil-military relations theory and its impact on the contemporary world scene. Emphasis is placed on the extent to which these relations affect military security. The relationship of civil and military law will also be examined.

402. Military Science IV. *Spring* (1) Captain Pratt

Organizational Management studies. The course will present classical and behavioral theories of organizational leadership. Also investigated will be individual and organizational motivation, effects of stress on organizational effectiveness, and problems related to drug abuse and race relations within the military environment.

Modern Languages and Literatures¹

ASSOCIATE PROFESSOR HALLETT (Chairperson), PROFESSORS COKE, COX, KALLOS, MARTEL,² MOORE, and OUSTINOFF. ASSOCIATE PROFESSORS BACKHAUS, BABENKO, BASSOFUNIGIELLO, P. CLOUTIER, DIDUK, FRASER, LAVIN, NETICK, PALMAZ, SAINT-ONGE, G. SMITH, and J. SMITH. ASSISTANT PROFESSORS M. CLOUTIER,³ EGER, GRIFFIN, KELLEY, LITTLEFIELD,⁴ MARCHESSEAU, MONSON, TRIOLO, and WELCH.

THE PROGRAM IN MODERN LANGUAGES AND LITERATURES

Courses in the 100 and 200 groups are designed to give a well-rounded linguistic experience, including the spoken as well as the written language, and to develop an awareness and appreciation of other cultures. Language laboratory is an integral part of courses 101 and 102; three class meetings and two hours in the language laboratory.

A student who has started a language in high school and wishes to continue that language at the level of 202 or below, will be placed according to performance on the reading Achievement Test in that language. In most cases students will be bound by the results of the test and will not be permitted to begin at either a higher or lower level than is indicated by performance on these tests unless they receive permission from the Chairperson of the department. In no event will a person who has completed four high school units be eligible to take 101-102 in that language for credit.

Courses in the 300 and 400 groups are designed to give further experience in the principal facets of language study, a reasonable knowledge of literature, and some experience in literary criticism. Classes are generally conducted in the foreign language.

For those who show a special interest in French, German, Italian, or Spanish, the College has established language houses where such students may request residence with others who elect to use a foreign idiom as a means of communication. Foreign students in residence provide an opportunity for unstructured language learning as well as a source of information on current living in the target language countries.

CONCENTRATION

The Department's programs of concentration in French, German, and Spanish offer a wide range of language and literature courses to students who are preparing for graduate study in Literature or Comparative Literature, or to those who enjoy the study of foreign literatures, their style and ideas, their intellectual stimulation and humanizing influence. Ample training in the use of analytical methods in their approach to textual criticism enhances this solid liberal background for eventual professional studies. Additionally, courses provide a knowledge of the language, of its morphology and syntax, acquired concomitantly with fluency and correctness in oral and written expression. The Department's offerings are of interest to concentrators contemplating graduate work in Linguistics or to those fulfilling requirements in an additional major field such as English or a second foreign language, History, or the political and social sciences. The programs offer students an opportunity to be better prepared for industry, commerce, government and public services. Majoring students preparing a career in the secondary school teaching of foreign languages will find especially in the advanced language classes a necessary complement to their vocational courses. Many students are using the double-major option, combining modern languages with the Social Sciences and the humanities.

¹The proficiency requirements for foreign languages are indicated on page 46. All language requirements for a degree should be begun in the freshman year.

²On leave, Fall 1977.

³Fall 1977 only.

⁴On leave, Fall 1977.

MODERN LANGUAGES AND LITERATURES

Concentrators in Modern Languages and Literatures are required to take at least two college courses in a second foreign language.

Specific concentration requirements for French, German, and Spanish can be found with course listings of each language.

INTERDISCIPLINARY PROGRAMS

The Department is actively engaged in courses of Comparative Literature and in interdisciplinary programs. In relating their language skills to the exploration of topics which transcend national boundaries, the students obtain a broad view of the European and Latin communities.

Comparative Literature 201, 202 may be combined with any courses in the Modern Languages and Literatures Department labelled (S) in order to make a sequence in Comparative Literature.

The suitability of the Department's offerings to an Interdisciplinary concentration is further enhanced by the literature courses in translation which extend the vast areas of French, German, Italian, Spanish, and Russian literature otherwise not readily available to students who do not major in language study.

Modern Languages 203. (A) An introduction to the Semitic Languages. Spring (3) Staff.

A survey of the principal phonological and grammatical characteristics and writing systems of Arabic, Hebrew and some lesser-known members of the Semitic group. The aim is not acquisition of active language skills but the exposition of a language system culturally inseparable from the foundations of western civilization while linguistically alien to our Indo-European.

CHINESE

101, 102. Elementary Chinese (Mandarin). Fall and Spring (4, 4) Staff.

Training in conversation, grammar, reading and elementary composition. A special course taught according to the self-instructional method in conjunction with the University of Virginia East Asian Language and Area Center. Three class hours, two laboratory hours. Does not fulfill the College's foreign language proficiency requirement.

201, 202. Intermediate Chinese (Mandarin). Fall and Spring (4, 4) Staff. Prerequisite: Chinese 101 and 102.

Training in conversation, grammar, reading and elementary composition. A special course taught according to the self-instructional method in conjunction with the University of Virginia East Asian Language and Area Center. Three class hours, two laboratory hours. Does not fulfill the College's foreign language proficiency requirement.

FRENCH

Requirements for Concentration

The following courses are required for concentration in French: French 321, 332, 305 (formerly 404), 306 (formerly 405), also, either 341 or 342 and either 351 or 352; a minimum of nine additional hours will be chosen among the 300 and 400 level courses, excluding 301,¹ 302,¹ 307 and 308.

The program in French includes two major emphases (1) French literature and (2) French language. In addition to the courses required of all majors, an individual may emphasize literature or language by electing courses according to these options. Students emphasizing literature are encouraged to consider courses in French civilization and stylistics in addition to a comprehensive span of courses in French literature from the

¹Strongly recommended as an introduction to all "300" level literature courses.

MODERN LANGUAGES AND LITERATURES

Middle Ages to the present. Students emphasizing French language are advised to elect multiple courses in conversation, writing, and civilization. A course in descriptive linguistics (English 405—Anthropology 430) is strongly recommended.

DESCRIPTION OF COURSES

101-102. Elementary French. *Fall and Spring (4, 4) Staff.*

Students who have acquired 4 high school units in French may not take French 101-102 for credit. Training in grammar, pronunciation, aural-oral comprehension with the use of audio-visual techniques. *Three Class Hours, Two Laboratory Hours.*

101X-102X. Intensive Elementary French. *Fall and Spring (4, 4) Mr. Cloutier. Permission of the instructor is required.*

Intensive training in grammar, pronunciation and oral-aural comprehension. The work includes practice in understanding both the spoken and written languages: three lecture hours in the Master Class, three hours in the Drill Class and three hours in the Laboratory.

201. Readings in French and Grammar Review. *Fall (3) Staff. Prerequisite: French 101-102 or placement by Achievement Test score.*

A review and continuation of the study of French grammar, incorporated with the continued development of reading, writing, speaking, and comprehension skills.

202. Intermediate Readings in French Literature. *Fall and Spring (3) Staff. Prerequisite: French 201 or placement by Achievement Test score.*

Selected readings from French literature of the nineteenth and twentieth centuries.

205. Intermediate Composition. *Fall and Spring (3) Staff. Prerequisite: Four high school units, or French 202, or permission of the instructor.*

Review of main principles of syntax and composition.

206. Intermediate Conversation. *Fall and Spring (3) Staff. Prerequisite: French 205 or permission of the instructor.*

Intensive oral-aural training. Discussions of topics in French life and culture; student presentations.

207. Advanced Readings in French Literature. *(AS) Fall (3) Staff. Prerequisite: four high school units or French 202 or permission of the instructor.*

Selected readings from the Renaissance to modern times. A reading course designed as an introductory step to the 300 courses in literature.

301. A Survey of French Literature from the Middle Ages through the 17th century. *(AS) Fall (3). Staff. Prerequisite: four high school units or French 202, or the permission of the instructor.*

A study of the historical development of the literary genres from the Middle Ages to the 18th century.

302. A Survey of French Literature from the 18th century into the 20th century. *(AS) Spring (3) Staff. Prerequisite: four high school units or French 202, or permission of the instructor.*

A study of the historical development of the literary genres from the 18th century to modern times.

305. Advanced Grammar and Explication de Texte. *(AS) Spring (3) Saint-Onge. Prerequisite: French 205 and another 200 level course or permission of the instructor. Required of all concentrations.*

Advanced syntax and intensive written work.

MODERN LANGUAGES AND LITERATURES

306. Advanced Conversation. (AS) *Fall and Spring* (3) Staff. *Prerequisite:* French 205, and another 200 level course, or permission of the instructor. Required of all concentrators.

Intensive oral-aural training.

307, 308 French Civilization I and II (AS) *Fall and Spring* (3, 3) Palmaz. *Prerequisite:* four high school units or French 202 or permission of the instructor.

French Civilization I—Study of the evolution of French civilization (history, fine arts, music, architecture, etc.) from early times to 1715.

French Civilization II—Study of the evolution of French civilization from 1715 to the present.

311. Literature of the Middle Ages. (AS) *Spring* (3) Monson. *Prerequisite:* French 301 or 302 or permission of the instructor.

A study of French literature up to 1500: representative works. (Most texts are read in Modern French translation.)

312. Renaissance Literature. (AS) *Spring* (3) Hallett. *Prerequisite:* French 301 or 302 or permission of the instructor. (Not offered 1977-78.)

A study of the major writers of the French Renaissance.

321. Seventeenth-Century French Literature I. (AS) *Fall* (3) Mr. Cloutier and Monson. *Prerequisite:* French 207 or 301 or 302 or permission of the instructor. Required of all concentrators.

Dramatic literature of the seventeenth century, emphasizing the major works of Corneille, Molière, and Racine.

322. Seventeenth-Century French Literature II. (AS) *Spring* (3) Staff. *Prerequisite:* French 207 or 301 or 302 or permission of the instructor.

Non-dramatic literature of the seventeenth century: the baroque poets. Malherbe. Pascal, La Fontaine, Boileau, and other major writers of the period.

331. Eighteenth-Century French Literature I. (AS) *Fall* (3) Welch. *Prerequisite:* French 207 or 301 or 302 or permission of the instructor.

The novel and the theatre of the eighteenth century.

332. Eighteenth-Century French Literature II. (AS) *Spring* (3) Oustinoff. *Prerequisite:* French 207 or 301 or permission of the instructor. Required of all concentrators.

A study of the major writers of the French Enlightenment: Montesquieu, Voltaire, Diderot, Rousseau, and others.

341. Nineteenth-Century French Literature I. (AS) *Fall* (3) St. Onge. *Prerequisite:* French 301 or 302 or permission of the instructor. Concentrators must take either French 341 or 342.

A study of the major romantic writers in France.

342. Nineteenth-Century French Literature II. (AS) *Spring* (3) Martel. *Prerequisite:* French 301 or 302 or permission of the instructor. Concentrators must take either 341 or 342.

The novel of the nineteenth century with special emphasis on Balzac, Stendhal, Flaubert and Zola.

350. Modern French Poetry. (AS) *Spring* (3) St. Onge. *Prerequisite:* French 341 or at least nine hours of 300 literature courses or permission of the instructor.

From the post-romantic poets to the present with special emphasis on Baudelaire, the Symbolists, and the Surrealists.

MODERN LANGUAGES AND LITERATURES

351. Twentieth-Century French Literature I. (AS) Fall (3) Oustinoff. Prerequisite: Two "300" level courses other than 301 or 302, or permission of the instructor. Concentrators must take either 351 or 352.

A study of representative writers and works up to 1939.

352. Twentieth-Century French Literature II. (AS) Spring (3) Mr. Cloutier. Prerequisite: Two "300" level courses other than 301 or 302, or permission of the instructor. Concentrators must take either 351 or 352.

A study of representative writers and works since 1939: existential literature, the new novel.

387. 20th-Century French Theatre and its Influence in English Translation. (AS) Fall (3) Coke. Not open to concentrators in French. Same as Comparative Literature 307.

A study of trends in the modern French theater through selected readings of significant contemporary writers. The course includes discussion and reading of other major European or American writers connected with the French movement.

388. 20th-Century French Novel and its Influence in English Translation. (AS) Spring (3) Hallett. Not open to concentrators in French. Same as Comparative Literature 304.

A study of trends in the modern French novel through selected readings of significant contemporary writers. The course includes discussion and readings of other major European or American writers connected with the French movement.

406. Contemporary Spoken French. (AS) Spring (3) Martel. Palmaz. Prerequisite: French 306 or permission of the instructor. Intensive training in the contemporary French idiom.

407. French Phonetics and Diction. (AS) Spring (3) Oustinoff. Prerequisite: French 306 or permission of the instructor. This course may be taken concurrently with French 406. Recommended for students who expect to teach French in high school.

Intensive study of phonetics, with particular attention given to the exceptions to the "rules" of French pronunciation and to individual problems.

408. Advanced Writing in French. (AS) Fall (3) Ms. Cloutier. Prerequisite: French 305 or the equivalent.

An intensive course in writing and language analysis.

411. Independent Study. Fall and Spring (3) Staff.

This course is designed to permit an in-depth study in an area of literature not available in current course offerings. A written petition to the instructor with whom the student wishes to work and approval of the coordinator of the section are required before a student may register.

431. The French Theatre. (AS) Fall (3) Coke. Prerequisite: Concentrators must have completed nine hours of 300 or 400 literature courses; non-concentrators must have the consent of the instructor.

A critical study of the development of the theatre in France from the Renaissance to modern times.

450. Seminar in French Literature. (AS) Fall and Spring (3) Staff. Prerequisite: at least nine hours of 300 or 400 literature courses.

Recommended for concentrators who expect to continue with graduate study. A study in depth of a limited literary topic. Students will write and present papers for critical discussion.

495-496. Honors. Fall and Spring (3, 3) Staff. (See page 52).

MODERN LANGUAGES AND LITERATURES

GERMAN

Requirements for Concentration

Thirty semester credits are required for concentration in German including German 307, 308, 301, 302, 303, 305, either 206 or 306, and at least three courses from the 400 level.

The recommended sequence of courses for majors is indicated by the prerequisites given for each course. These prerequisites may be waived, however, provided the student receives permission to do so from the instructor of the course for which he/she wishes to enroll.

DESCRIPTION OF COURSES

101-102. Elementary German. *Fall and Spring* (4, 4) Staff. Students who have acquired 4 high school units in German may not take German 101-102 for credit.

Training in pronunciation, grammar, aural-oral comprehension with the use of audio-visual techniques. *Three Class Hours, Two Laboratory Hours.*

150. Freshman Colloquia:

The Faust Theme in World Literature. *Fall* (3) Kallos.

The "Faust-Problem", the problem of acquiring power, no matter what the consequences, will be explored with the aim to transcend cultures and languages and focus on the problem. Music, art, and literature will be used.

Germany Between the Wars. *Spring* (3) Staff.

The course will deal with the interrelation between the arts and the political-economic factors of the period and will investigate the expressive function of the arts in an age of crisis.

201. Graded Readings in German Prose and Grammar Review. *Fall* (3) Staff. *Prerequisites: German 101-102 or placement by Achievement Test score.*

A review and continuation of the study of German grammar, incorporated with the continued development of reading, writing, speaking, and comprehension skills.

202. Intermediate Readings in German Literature. *Fall and Spring* (3) Staff. *Prerequisite: German 201 or placement by Achievement Test score.*

Selected readings from the masterpieces of twentieth century German literature.

204. Scientific and Professional German. *Spring* (3) G. Smith. *Prerequisite: German 201 or the equivalent.*

Reading of texts in specialized fields, such as the natural sciences, social sciences, business, medicine, etc. Individualized approach.

205. Intermediate Grammar and Composition. *Fall and Spring* (3) Backhaus, Kallos. *Prerequisite: four high school units or 202 or the equivalent.*

Review of main principles of syntax and composition.

206. Intermediate Conversation. *Fall and Spring* (3) Diduk. *Prerequisite: German 205 or permission of the instructor.*

Phonetics; intensive oral-aural training; discussion of topics in contemporary German life and culture; student presentations.

208. Introduction to German Literature. (AS) *Fall and Spring* (3) Kallos. *Prerequisite: German 202 or equivalent.*

A study and discussion of representative genres of German literature may be used as an introductory step to the 300 courses.

MODERN LANGUAGES AND LITERATURES

210-211. Topics in German Culture. *Fall and Spring* (1, 2). Corequisite: Current residence in the German House.

Residents in the German House will form a number of study groups, each of which will pursue a topic dealing with a facet of German culture. The course will be graded Pass/Fail. A junior or senior enrolled in this course will thereby utilize his Pass/Fail option for one semester of that year. A sophomore enrolled in the course will maintain the full Pass/Fail option in the junior and senior years.

301. German Literature from the Beginning to 1700. (AS) *Spring* (3). J. Smith. Prerequisite: German 307 or 208 or permission of the instructor.

A survey of German Literature from its beginning to end of the Baroque.

302. German Literature from 1700 to 1830. (AS) *Spring* (3) Backhaus. Prerequisite: German 307 or 208 or permission of the instructor.

A survey of German Literature covering the periods of Enlightenment and Classicism.

303. German Literature from 1830 to 1945. (AS) *Fall* (3) G. Smith. Prerequisite: German 308 or 208 or permission of the instructor.

A survey of German Literature covering the periods of Poetic Realism, Naturalism and the Modern Age.

305. Advanced Grammar and Composition. (AS) *Fall* (3) Eger. Prerequisite: German 205 or permission of the instructor.

Advanced syntax and intensive written work including essays.

306. Advanced Conversation. (AS) *Spring* (3) Diduk and Eger. Prerequisites: German 206 or permission of the instructor.

Advanced intensive oral-aural training. Discussions of German society and current affairs based on reading of current journals and periodicals.

307, 308. (Former 207) The German-Speaking Peoples and Their Civilization I and II. (AS) *Fall and Spring* (3, 3). Diduk. Prerequisite: German 206 or 208 or permission of the instructor.

Readings course embodying the most important elements of Germanic Civilization designed as an introductory step to the other 300 courses. The first semester includes films, illustrated lectures, readings, and student reports on the beginnings of Germanic Civilization to 1800. The second semester covers from 1800 to the present.

387, 388. Survey of Twentieth Century German Literature in English. (AS) *Fall and Spring* (3, 3) Diduk. Not open to concentrators in German.

A survey of twentieth-century masterpieces of German literature. First semester: the novel and novelle; second semester: drama and poetry.

397, 398. Contemporary German Authors in English Translation. (AS) *Fall and Spring* (3, 3) Staff. Open to concentrators in German as an elective.

The study in depth of a significant German writer of modern times. First semester: Hermann Hesse. Second semester: Thomas Mann.

Courses 401 through 410 are offered in alternate years, on a rotating basis.

401. Goethe. (AS) *Fall* (3) Backhaus. Prerequisite: 302 or permission of the instructor.

Reading and interpretation of Goethe's works with emphasis on the pedagogical and philosophical aspects. (Not offered 1977-78).

402. The Romantic Age. (AS) *Spring* (3) G. Smith. Prerequisite: German 302 or 308 or permission of the instructor.

A study of the literary works, aesthetic theories, philosophical background and

MODERN LANGUAGES AND LITERATURES

intellectual influences of the German Romantic movement between 1790 and 1830. (Not offered 1977-78).

403. German Drama from Romanticism to 1945. (AS) Fall (3) Eger. Prerequisite: German 302 or 303 or 308 or permission of the instructor.

A study of German drama from Romanticism to Expressionism and the epic theater; emphasizing such authors as Büchner, Hauptmann, Hofmannsthal, Kaiser and Brecht.

404. Twentieth Century German Literature. (AS) Spring (3) Kallos. Prerequisite: German 303 or permission of the instructor.

An intensive study of the literature of our own age, with emphasis on the drama and the novel since 1945. (Not offered 1977-78).

405. German Poetry. (AS) Fall (3) Kelley. Prerequisite: One of the 300-level courses in German literature or culture.

Reading and interpretation of outstanding poetic works from the seventeenth century to the present. (Not offered 1977-78).

406. History of the German Language. (AS) Fall (3) J. Smith. Prerequisite: German 307 or permission of the instructor.

A study of the history of the German Language from its origins to the present.

407. The German Novelle. (AS) Spring (3) G. Smith. Prerequisite: German 302 or 303 or 308 or permission of the instructor.

An intensive study of the German Novelle and its theory from the Romantic Age to 1945, encompassing such authors as Tieck, Kleist, Drost-Hülshoff, Storm, Keller, Thomas Mann and Kafka.

410. Special Topics in German Literature (AS) Spring (3) Staff. Prerequisite: One 300 level course in German literature or culture or permission of the instructor.

An in-depth study of a limited topic in German literature or in the relationship between literature and other disciplines. Course may be repeated for credit when topics differ.

Topic for Spring 1978: German Literature by Woman. Diduk.

A study of 20th century works by women in the Wilhelminian, Weimar, Nazi and post-World War II periods. The selections since 1945 will be from both East and West Germany.

450. Seminar in German and French Literature. (S) Spring (3) Kallos. (Same as Comparative Literature 450). Prerequisite: A good reading knowledge of German and French and permission of instructor.

Comparative readings of the poetry of Rainer M. Rilke and Charles Baudelaire in the original languages. The course will be conducted and the research papers will be written in English.

495-496. Honors. Fall and Spring (3, 3) Staff. (See page 52).

ITALIAN

101-102. Elementary Italian. Fall and Spring (4, 4) Staff. Students who have acquired 4 high school units of Italian may not take Italian 101-102 for credit.

Training in pronunciation, grammar, aural-oral comprehension with use of audiovisual techniques. *Three Class Hours, Two Laboratory Hours.*

201. Intermediate Italian. Fall (3) Staff. Prerequisites: Italian 101-102 or placement by Achievement Test score.

MODERN LANGUAGES AND LITERATURES

A review and continuation of the study of Italian grammar, incorporated with the continued development of reading, writing, speaking, and comprehension skills.

202. Readings in Italian Literature. Spring (3) Staff. Prerequisite: *Italian 201* or placement by Achievement Test score.

Selected readings primarily from the literature of the twentieth century.

206. Intermediate Conversation. Fall and Spring (3) Staff. Prerequisite: *Italian 202* or the equivalent.

Phonetics; intensive oral-aural training; discussions of topics in contemporary Italian life and culture; student presentations.

301. Masterpieces of Italian Literature from the Beginnings to the 17th Century. (AS) Fall (3) Triolo. Prerequisite: four high school units or *202* or the equivalent.

Survey of Italian Literature. Study of representative works.

302. Masterpieces of Italian Literature Since the 17th Century. (AS) Spring (3) Coke. Prerequisite: *Italian 301* or the equivalent.

Survey of Italian Literature. Study of representative works.

305, 306. Directed Reading in Italian Literature. (AS) Fall and Spring (3, 3) Staff. Prerequisite: *Italian 301* and *302* or the equivalent.

This course is designed to permit the student to pursue in depth an area of literature in which he has a major interest.

308. Reading for Comprehension in Italian. Fall (3) Staff. Students enrolling in this course are advised to have a strong background in some other modern or classical language.

An accelerated language course designed to develop comprehensive skills for reading literature and literary criticism.

387. Masterpieces of Italian Literature in English I. (AS) Fall Triolo.

An introduction to the major writers in Italy from the 13th century to the 18th century with emphasis on Dante, Petrarch, Boccaccio, and Macchiavelli.

388. Masterpieces of Italian Literature in English II. (AS) Spring. Staff.

An introduction to the major writers in Italy from the mid 18th century to the present with emphasis on Foscolo, Leopardi, Manzoni, Pirandello, and Moravia.

PORTUGUESE

101-102. Elementary Portuguese. Fall and Spring (4, 4) Fraser. Students who have acquired 4 high school units in Portuguese may not take Portuguese 101-102 for credit. Prerequisite: Previous or current enrollment in another romance language, or permission of the instructor.

Training in pronunciation, aural-oral comprehension with the use of audiolingual techniques. Three class hours. Two Laboratory hours.

RUSSIAN

101-102. Elementary Russian. Fall and Spring (4, 4) Staff. Students who have acquired 4 high school units of Russian may not take Russian 101-102 for credit.

Training in pronunciation, grammar, aural-oral comprehension with use of audiovisual techniques.

201. Intermediate Russian. Fall (3) Babenko. Prerequisites: Russian 101-102 or placement by Achievement Test score.

MODERN LANGUAGES AND LITERATURES

A review and continuation of the study of Russian grammar, incorporated with the continued development of reading, writing, speaking, and comprehension skills.

202. Readings in Masterpieces of Russian Literature. Spring (3) Staff. Prerequisite: Russian 201 or placement by Achievement Test score.

Selected readings from Russian literature of the 19th century.

206. Intermediate Conversation. Fall (3) Babenko. Prerequisite: Russian 202 or permission of the instructor. Offered on a rotating basis in alternate years, with Russian 301.

Phonetics; intensive oral-aural training; discussion of topics in contemporary Russian-Soviet life and culture; student presentations.

207. Cultural History of Russia. Fall (3) Netick. Prerequisite: Russian 206 or permission of the instructor. Offered on a rotating basis in alternate years, with Russian 302.

A course embodying the most important elements of pre-revolutionary Russian and Soviet culture and civilization.

301. Survey of Russian Literature from the Beginning to 1850. (AS) Fall (3) Babenko. Prerequisite: four high school units or 202 or permission of the instructor.

Survey of literature up to 1850. Study of representative works. (Not offered 1977-78).

302. Survey of Russian Literature from 1850 to the Present. (AS) Spring (3) Babenko. Prerequisite: Russian 301 or permission of the instructor.

Survey of Russian literature from 1850 to the present. Study of representative works. (Not offered 1977-78).

305, 306. Directed Reading in Russian Literature. Fall and Spring (3, 3) Staff. Prerequisite: Russian 301 and 302 or permission of the instructor.

This course is designed to permit an in-depth study in an area of literature.

387, 388. Survey of Russian Literature in English. (AS) Fall and Spring (3, 3) Netick.

A chronological survey of Russian literature from its beginnings to the Soviet Period, with emphasis given to the major writers of the 19th Century.

397. Dostoyevsky in English Translation. (AS) Fall (3) Babenko.

A study in English translation, of Dostoyevsky's chief works, with due attention to the political and literary milieu in which he wrote.

398. Tolstoy in English Translation. (AS) Spring (3) Babenko.

A study in English translation, of Tolstoy's life and chief literary works.

SPANISH

Requirements for Concentration

Thirty semester credits are required for concentration in Spanish including Spanish 301, 302, 305, 306 and at least six other courses from the 300 to 400 levels. Concentrators may not take 310 and above without first taking 301 and 302. In the courses above Spanish 205 Spanish will be the language of instruction. Each 400-level course will normally be offered every other year.

DESCRIPTION OF COURSES

101-102. Elementary Spanish. Fall and Spring (4, 4) Staff. Students who have acquired 4 high school units in Spanish may not take Spanish 101-102 for credit.

MODERN LANGUAGES AND LITERATURES

Training in pronunciation, aural-oral comprehension with the use of audio-lingual techniques. *Three Class Hours. Two Laboratory Hours.*

201. Intermediate level Spanish. *Fall and Spring (3, 3) Staff. Prerequisite: Spanish 101-102 or placement by Achievement Test score.*

A review and continuation of the study of Spanish grammar, incorporated with the continued development of reading, writing, speaking, and comprehension skills.

202. Intermediate Level Spanish. *Fall and Spring (3, 3) Staff. Prerequisite: Spanish 201 or placement by Achievement Test score.*

Selected readings from Spanish and Spanish Latin American Literature.

205. Intermediate Grammar and Composition. *Fall and Spring (3) Fraser. Prerequisite: Spanish 202 or the equivalent.*

Review of main principles of syntax and composition.

206. Intermediate Conversation. *Fall and Spring (3) Griffin. Prerequisite: Spanish 205 or the equivalent.*

Intensive oral-aural training; discussions of topics in Spanish life and culture, student presentations.

301. Spanish Literature from the Beginning to 1700. (AS) *Fall (3) Moore and Cox. Prerequisite: Spanish 202 or the equivalent.*

Survey of Peninsular Spanish literature.

302. Spanish Literature from 1700 to the Present. (AS) *Spring (3) Moore and Cox. Prerequisite: Spanish 202 or the equivalent.*

303. Latin-American Literature of the Colonial Period. (AS) *Fall (3) Fraser. Prerequisite: Spanish 202 or the equivalent.*

Survey of Latin-American Literature from its beginnings to the end of the colonial period.

304. Latin-American Literature from the Colonial Period to the Present. (AS) *Spring (3) Fraser. Prerequisite: Spanish 202 or the equivalent.*

Survey of Latin-American Literature from the end of the colonial period to the present.

305. Advanced Grammar and Composition. (AS) *Fall (3) Cox and Littlefield. Prerequisite: Spanish 205 or the equivalent.*

Intensive review of syntax; composition.

306. Advanced Conversation (AS) *Spring (3) Littlefield. Prerequisite: Spanish 305. Intensive oral-aural training.*

307, 308. Cultural History of Spain. (AS) *Fall and Spring (3, 3) Larvin. Prerequisite: Previous or current enrollment in Spanish 301, or permission of the instructor. Completion of History 101-102 are encouraged.*

A survey of artistic and literary trends as they relate to the history of Spain.

310. Seminar in Spanish or Latin-American Literature. (AS) *Spring (3) Staff. Topic or author to be indicated in the schedule of classes.*

397, 398. Hispanic Topics in English Trans. (AS) *Fall and Spring (3, 3) Staff. Not open to concentrators in Spanish.*

Concentrated study of a particular author, work or area of Spanish or Spanish American culture. Specific topic to be listed each semester.

Courses in the 400 level are normally offered in alternating years.

MUSIC

401. Medieval Spanish Literature. (AS) Fall (3) Littlefield.

Spanish literature from El poema de mio Cid through LaCelestina. Study of representative works.

402. Cervantes. (AS) Spring (3) Moore.

Analysis of Cervantes' major works with particular emphasis on the *Quijote* and the *Novelas ejemplares*.

403. Prose and Poetry of the Golden Age. (AS) Spring (3) Lavin.

Non-dramatic literature of the sixteenth and seventeenth centuries with particular emphasis on the development of lyric poetry. Study of representative works.

404. Drama of the Golden Age. (AS) Fall (3) Lavin.

Survey of the drama from its beginnings. Detailed study of the drama of the Golden Age. Study of representative works.

406. Eighteenth-Century Spanish Literature. (AS) Spring (3) Cox.

Study of representative works in the novel, poetry, and drama.

407. Spanish Romanticism (AS) Fall (3) Cox.

Study of representative works in the novel, drama, and poetry from Meléndez Valdés through Bécquer.

408. Spanish Realism and the Generation of '98. (AS) Spring (3) Griffin.

Study of the realistic and naturalistic novel and representative works of the Generation of '98. The course also includes the poetry of Machado and Jiménez.

409. Contemporary Spanish Literature. (AS) Fall (3) Griffin.

A study of the novel, drama, and poetry in Spain following the generation of '98 and continuing to the present.

410. Hispanic Philology: Spanish Historical Phonology. (AS) Spring (3) Littlefield.
Prerequisite: Spanish 305 or 306.

Scientific analysis of articulation of sounds and the study of the interrelation of Spanish and other Romance languages.

411. Independent Study. Spring (3) Staff.

This course is designated to permit an in-depth study in an area of literature not available in current course offerings. A written petition to the instructor with whom the student wishes to work and approval of the coordinator of the section are required before a student may register.

495-496. Honors. Fall and Spring (3, 3) Staff (See page 52).

Music

ASSOCIATE PROFESSOR LENDRIM (Chairman), PROFESSORS STEWART, TRUESDELL, and VARNER, ASSOCIATE PROFESSOR FREEMAN, ASSISTANT PROFESSOR HAMILTON, LECTURERS BREEZE, CARLSON, DARLING, FLETCHER, GODSHALL, HALL, KESTER, KNORR,¹ KOLLER, LENDVAY, LINDBERG, OWEN, SHORT, SMETANA, and STEVENS.

The Department of Music offers concentrations for (1) prospective school music teachers; (2) students interested in a liberal arts program with emphasis on music; and (3) students who wish to continue with graduate work in musicology, composition, theory, applied music, or library science.

¹On leave 1977-78.

MUSIC

REQUIREMENTS FOR CONCENTRATION

The basic requirements for concentration in Music include 12 credits in Music Theory (Music 201, 202, 301, and 302); 6 credits in Music History (Music 311 and 312); 8 credits in Applied Music Instruction, in one field; and 10 more credits in music in the special concentration programs. (Special concentration programs are additional courses in Theory, Music Education, Music History and Literature or Applied Music.) Proficiency at the Elementary Piano level is considered basic to all programs and is a requirement for graduation. All concentrators in Music are expected to participate in a senior recital, in lieu of which a term paper, or an original musical composition may be accepted with Departmental approval.

Concentrators in Music are required to complete Senior level Applied Music instruction courses in their major applied music field for graduation. In addition, they should complete courses in both instrumental and vocal techniques and choral and instrumental conducting if their emphasis is in Music Education.

Students preparing for the Virginia State Collegiate Professional Certificate are required by the Virginia Board of Education to qualify in general as indicated in the Education section of this catalog. To meet state certification requirements, applied Music and Music Theory must be started in the freshman year. A recommended sequence of courses for Music Education majors is available in the Departmental Office.

DESCRIPTION OF COURSES

THEORY

101. Introduction to Theory. *Fall and Spring* (2) Mrs. Freeman and Mr. Stewart.

Terms, symbols, and conventions of music notation. This course is intended for those with no previous music experience. The aim is to introduce the student to the technique of reading music. Topics covered include the staff, clef signs, key signatures, scales, intervals, triads, meter signatures, rhythmic patterns, etc. May not be included in music concentration.

102. Introduction to Form and Style. *Spring* (2) Mr. Stewart.

The underlying principles of musical structure. May not be included in music concentration.

201-202. Theory I. *Fall and Spring* (3, 3) Mr. Hamilton and Mr. Stewart.

This course presupposes some previous experience with music. Students are encouraged to co-enroll in Music 203, 204. The specific texts for and content of the course, and the chronology of presentation for either semester is the choice of the instructor. The following is a reasonable approximation:

First semester: Intervals, scales, key signatures, etc. and their notation; introduction to functional tonality; the triad; diatonic harmony in four voices; chord functions in major and minor; non-chord tones; the dominant seventh chord and secondary dominants; the figured bass; harmonic analysis of functional-tonal literature.

Second semester: Continued experience with four-voice harmony and harmonizing figured basses; continued harmonic analysis of functional-tonal literature; the introduction of different types of seventh chords; introduction of the concepts of tonicization and modulation; the technique of modulation; harmonizing unfigured basses; introduction to harmonizing melodies.

***203, 204. Ear Training and Sight-Singing.** *Fall and Spring* (2, 2) Mr. Hamilton. Prerequisites: Concurrent enrollment in Music 201-202 or 301-302 or consent of instructor.

Designed primarily for music concentrators. The course focuses on the development of reading, recognition, and notation skills. Students will practice reading by singing

MUSIC

various kinds of pitch and rhythm patterns, with the goal being to establish a basic fluency in sight-singing. Recognition and notation skills are practiced by means of melodic, rhythmic, and harmonic dictation.

301-302. Theory II. *Fall and Spring* (3, 3) Mr. Hamilton and Mr. Stewart. *Prerequisite:* Music 201-202. The general remarks about Music 201-202 apply here also.

First semester: Introduction to chromatic harmony; the completion of the functional-tonal vocabulary; altered chords; increasing complexity in use of non-chord tones; study of the gradual weakening of the sense of traditional tonality; continuing harmonic analysis of functional-tonal literature; basic principles of forms in tonal music as it relates to functional tonality.

Second semester: Continuation of above studies; application of tonal-harmonic techniques and principles to elementary composition; late nineteenth century developments in the decline of functional tonality.

401-402. Form and Analysis. *Fall and Spring* (2, 2) *Prerequisite:* Music 301-302.

The structural processes and forms of music, studied through analysis of examples of various periods and styles.

403-404. Orchestration and Choral Arranging. *Fall and Spring* (2, 2) Mr. Stewart and Mr. Truesdell. *Prerequisite:* Music 301.

Fall, orchestration; Spring, choral arranging.

405, 406. Counterpoint. *Fall and Spring* (2, 2) Mr. Truesdell and Mr. Stewart. *Prerequisite:* Music 301.

Fall, counterpoint in the 16th century style of the motet, the madrigal and the Mass. Spring, counterpoint in the style of J. S. Bach.

***407-408. Composition.** *Fall and Spring* (3, 3) Mr. Hamilton. *Prerequisite:* Music 201-202 or consent of instructor.

Intended for those wishing to do original work in composition. Students will be encouraged to begin writing for single instruments or small ensembles with works for larger ensembles following in the second term. There will be classes in which music and writings by selected composers will be discussed and analyzed. Individual sessions will deal with the students' own work.

MUSIC HISTORY AND LITERATURE

211-212. Introduction to Music. (A) *Fall and Spring* (3, 3) Mrs. Freeman, Mr. Lendrim and Mr. Truesdell.

This course is designed to meet the needs of students interested in music, without regard to previous training and experience. It is not open to juniors or seniors concentrating in Music. The course traces the development of the art of Music through the various historical periods and familiarizes the student with the more important composers and their works. A synopsis of style, form, and theory is included. This course, or its equivalent, is a prerequisite for most of the other Music History and Literature courses, specifically 314, 315, 316, 317, 318, 319, and 340.

213. Jazz. (A, S) *Fall* (3) Mr. Truesdell.

The antecedents and development of Jazz to the present. Students should have some musical background and knowledge of musical terminology. If this is lacking, students should register for Music 101 as a corequisite for the course.

***310. Piano and Violin Literature.** *Fall and Spring* (2, 2) Mrs. Short.

The study and performance of representative piano and violin sonatas. This course offers opportunity for study and performance with the instructor. Open only to advanced keyboard students.

MUSIC

311-312. History. *Fall and Spring* (3, 3) Mrs. Freeman. Prerequisite or corequisite: Music 201-202.

Fall: Western music from the Middle Ages to the time of Bach; Spring: from the eighteenth century to the present. Music will be considered in its cultural and intellectual context as well as in the evolution of genres, forms, and styles. Open only to music concentrators.

314. The Symphony. (S) *Spring* (3) Mr. Truesdell. Prerequisite: Music 211-212 or 311-312.

A study of representative symphonic works of various periods; their style, form and orchestral setting. The course is conducted on an intermediate level, and is not open to Music concentrators.

315, 316. Opera. (S) *Fall and Spring* (3, 3) Mr. Truesdell. Prerequisite: Music 211-212 or 311-312.

Plots, music, background of selected masterpieces from the standard operatic repertoire. Fall: *bel canto* and French Grand Opera. Spring: German Romantic Opera, Wagner, Strauss, Nationalists, and modern developments.

317. Medieval and Renaissance Music. (S) *Spring* (3) Mrs. Freeman Prerequisite: Music 211-212 or 311-312.

The development of European music from Gregorian Chant through the beginnings of polyphony to Palestrina and Byrd, and the corresponding growth of secular and instrumental music. Forms, styles, composers, and modes of performance will be studied.

318. Seventeenth and Eighteenth Century Music. (S) *Fall* (3) Mr. Truesdell. Prerequisite: Music 211-212 or 311-312.

The history of music in the Baroque and Classical eras; the development of opera, oratorio, sonata, concerto, symphony, and other forms. (Not offered 1977-78)

319. Music of the Nineteenth Century. (S) *Fall* (3) Mr. Lendrim. Prerequisite: Music 211-212 or 311-312.

A survey of instrumental and vocal works of the nineteenth century. Representative works of Beethoven, Schubert, Schumann, Mendelssohn, Berlioz, Chopin, Brahms, Verdi, Wagner, Bruckner, and Mahler will be studied.

340. Music of the Twentieth Century. (S) *Fall* (3) Mr. Hamilton. Prerequisite: Music 211-212 or 311-312.

A survey of the development of twentieth century music. The decline of functional tonality serves as the background for an investigation of those modes of musical thought which are representative of this century's music. (Not offered 1977-78)

#413, 414. Problems in Music. *Fall or Spring* (2-3, 2-3) Staff. For seniors only.

Directed independent study resulting in a thesis.

MUSIC EDUCATION

320. Music for Elementary School Teachers. *Fall and Spring* (3, 3) Mr. Varner.

A course designed for prospective general teachers in the elementary grades. Not open to Music concentrators.

***321. Music in the Elementary School.** *Fall* (3) Mr. Varner.

Problems confronting the teacher of music in the elementary schools, and methods of instruction appropriate to the several grades. Primarily for Music concentrators.

***322. Music in the Secondary School.** *Spring* (3) Mr. Varner.

Materials and methods of instruction on the secondary school level.

MUSIC

***323, 324, 325. Instrumental Techniques, Materials and Methods.** *Fall or Spring* (2, 2, 2) Mr. Varner.

Three courses are assigned, one each to woodwinds, brass, and strings; the development of performance skills and a study of the materials and methods of teaching. Percussion is correlated throughout.

***326. Choral Materials and Procedures.** *Spring* (3) Mr. Lendrim. Prerequisite: *Music 201-202*.

A study of vocal and choral techniques and teaching methods. (Not offered 1977-78.)

***327, 328. Choral and Instrumental Conducting.** *Fall and Spring* (2, 2) Mr. Lendrim and Mr. Varner. Prerequisite: *Music 201-202*.

Study and practice in the techniques of the baton; problems of organizing musical groups.

APPLIED MUSIC

The College offers individual instruction in Voice, Piano, Organ, Strings, Woodwinds, Brass, and Percussion.

A maximum of 14 credits may be earned through instruction courses and through participation in musical organizations. The Department recommends that 10 of these 14 credits be taken in individual instruction and 4 credits in participation in musical organizations. (Music concentrators may earn additional credit if applied music is part of their special concentration program as described on the previous page under "Requirements For Concentration.") Prerequisite or corequisite for credit in Applied Music or Ensembles is Music 101. No credit in Applied Music or Ensembles is given until this requirement is met. Advanced students may take an exemption test, which, if passed, would fulfill this requirement. Approval of the instructor is required for all courses and ensembles in Applied Music.

Individual instruction in Applied Music is given on the basis of a 30-minute private lesson once a week for which the student earns one credit per semester. An advanced student, with the instructor's approval, may take a one hour private lesson once a week for which the student would earn two credits per semester. Minimum preparation for each lesson is one hour of daily practice.

NOTE: An additional fee is charged for these lessons. For the amount of this fee, see Applied Music Fees on p.

ENSEMBLE

- | | |
|----------------------------|---|
| *131. Band | <i>Fall and Spring</i> (1, 1) Mr. Varner |
| *132. Choir | <i>Fall and Spring</i> (1, 1) Mr. Lendrim |
| *133. Chorus | <i>Fall and Spring</i> (1, 1) Mr. Lendrim |
| *134. Orchestra | <i>Fall and Spring</i> (1, 1) Mrs. Short |
| *135. Chamber Music | <i>Fall and Spring</i> (1, 1) Staff |

INDIVIDUAL INSTRUCTION

*Voice 151-451. Mrs. Breeze and Mrs. Fletcher.

151. I, II. Elementary Voice. *Fall and Spring* (1, 1)

251. I, II, III, IV. Intermediate Voice. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)

351. I, II, III, IV. Senior Voice. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)

451. I, II, III, IV. Advanced Voice. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)

*Piano 151-452. Mr. Godshall, Mrs. Knorr, Mrs. Lendvay, Mrs. Owen, Ms. Stevens and Mr. Truesdell.

152. I, II. Elementary Piano. *Fall and Spring* (1, 1)

PHILOSOPHY

252. I, II, III, IV. Intermediate Piano. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
352. I, II, III, IV. Senior Piano. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
452. I, II, III, IV. Advanced Piano. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
- *Organ 153-453. Mr. Darling, Mr. Godshall, and Mrs. Koller.
153. I, II. Elementary Organ. *Fall and Spring* (1, 1)
253. I, II, III, IV. Intermediate Organ. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
353. I, II, III, IV. Senior Organ. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
453. I, II, III, IV. Advanced Organ. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
- *Strings, 154-454. Mrs. Short, Mr. Stewart, and Mr. Smetana.
154. I, II. Elementary Strings. *Fall and Spring* (1, 1)
254. I, II, III, IV. Intermediate Strings. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
354. I, II, III, IV. Senior Strings. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
454. I, II, III, IV. Advanced Strings. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
- *Woodwinds 155-455. Mr. Kester and Mr. Varner.
155. I, II. Elementary Woodwinds. *Fall and Spring* (1, 1)
255. I, II, III, IV. Intermediate Woodwinds. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
355. I, II, III, IV. Senior Woodwinds. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
455. I, II, III, IV. Advanced Woodwinds. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
- *Brass 156-456. Mr. Hall and Mr. Carlson.
156. I, II. Elementary Brass. *Fall and Spring* (1, 1)
256. I, II, III, IV. Intermediate Brass. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
356. I, II, III, IV. Senior Brass. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
456. I, II, III, IV. Advanced Brass. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
- *Percussion 157-457. Mr. Lindberg
157. I, II. Elementary Percussion. *Fall and Spring* (1, 1)
257. I, II, III, IV. Intermediate Percussion. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
357. I, II, III, IV. Senior Percussion. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)
457. I, II, III, IV. Advanced Percussion. *Fall and Spring* (1-2, 1-2, 1-2, 1-2)

Philosophy

ASSOCIATE PROFESSOR FUCHS (Chairperson). PROFESSORS FOSTER and JONES. ASSOCIATE PROFESSORS COBB,¹ HARRIS,¹ MCLANE, and REED. ASSISTANT PROFESSORS BELGUM AND BOHL,¹ ACTING ASSOCIATE PROFESSOR ANGENE and ACTING ASSISTANT PROFESSOR BRICKHOUSE.

The Department, through a varied and extensive program of courses, presents students with past and present attempts to think critically and reflectively about fundamental questions of knowledge and value in order that they will be led to examine their own views.

Two introductory courses are offered, one using a topical and the other an historical approach to the problems of philosophy. A large number of middle-level courses are offered that are intended to meet the needs of students who wish to sequence in philosophy or who wish to take courses that might be particularly relevant to their own field of concentration. Many philosophy courses are particularly suited to the needs of students with Interdisciplinary Concentrations. The department also offers specialized and intensive courses of an historical, methodological, and systematic character for those students who wish to concentrate in philosophy. A concentration may serve as a preparation for graduate study or, as is more usually the case, as a sound foundation for a liberal education. Many concentrators go into professions such as law where training in philosophical analysis is particularly advantageous.

The study of philosophical problems in the spirit of free inquiry requires the student to

¹On leave 1977-78.

PHILOSOPHY

develop and exercise the powers of precise discrimination, creative imagination, logical organization, and evaluative judgment. Philosophical inquiry finds its subject-matter wherever people are thinking: in science, in law, in education, in religion.

REQUIREMENTS FOR CONCENTRATION

A student whose aim is to use a concentration in Philosophy as a basis for a liberal education may take the minimum concentration requirement of twenty-seven hours in the Department. Those who wish to prepare for graduate study in philosophy or a related discipline will normally take more than this required minimum. No specific set of courses is prescribed for all concentrators. However, every concentrator should have some acquaintance with the history of philosophy, various types of philosophy, alternative philosophical methodologies, and with advanced analysis of particular philosophers and contemporary philosophical issues. A program for each concentrator will be developed through consultation with members of the philosophy faculty.

DESCRIPTION OF COURSES

101, 102. Introduction to Philosophy. (A) *Fall and Spring* (3, 3) Angene, Belgium, Brickhouse, Foster, McLane, and Reed.

An introduction to the problems, method and scope of philosophical enquiry. Readings are drawn from contemporary and historical sources. 101 emphasizes the areas of Logic and Values, e.g., good reasoning, morality, and the existence of God. 102 emphasizes the areas of Metaphysics and Epistemology, e.g., conditions for knowledge freedom and determinism, and the relation between mind and body.

301. Introduction to Logic. (S) *Fall and Spring* (3) Angene and Brickhouse.

An introduction to principles of valid reasoning with special emphasis on modern symbolic techniques and their uses.

303. Ethics. (AS) *Fall and Spring* (3) Belgium and Brickhouse.

An introduction to the problems of ethics and the nature of ethical reasoning. Some consideration will be given both to historically important topics such as hedonism, egoism, utilitarianism, and relativism, and to contemporary moral issues such as abortion, euthanasia, civil disobedience, ecological values, the interests of non-human animals.

304. Aesthetics. (AS) *Spring* (3) Foster.

A philosophical analysis of the nature of aesthetic experience and its objects. Special attention will be given to apprehension and judgment, concepts and criteria, and meaning and truth in the arts.

305. Social and Political Philosophy and Ideology. (AS) *Fall and Spring* (3) Staff and Fuchs.

A philosophical examination of major social and political concepts such as authority, justice, law, obligation, and rights. Special attention will be given to the use of these ideas in ideologies such as Communism, Fascism, and Democracy.

306. Philosophical Problems. (AS) *Fall* (3) Staff. Prerequisites: Two courses in Philosophy. (Not offered 1977-78.)

A study of such major philosophical problems as those concerning knowledge and reality, morality and conduct, and art and beauty. Special attention will be devoted to philosophical method.

307. Philosophy of Higher Education. (AS) *Spring* (3) Staff. (Not offered 1977-78.)

A study of the philosophical and ideological foundations of the crisis in higher

PHILOSOPHY

education. Theories of the university and definitions of “liberal” education will be examined in terms of their presuppositions about the nature of man and society.

310. Philosophy of Law. (AS) Fall (3) Fuchs and Jones.

A critical examination of the essential concepts and types of arguments used in legal reasoning. The course will examine questions as: What are the criteria of valid laws? How do laws differ from other social rules? What is the relationship of law to morality? What is the nature and extent of the obligation to obey the law? What sanctions may the law legitimately impose? (Same as Government 310)

311. Philosophy of Religion. (AS) Fall (3) Reed.

A philosophical investigation of the nature of religious experience, activity, and belief. The course will also include an examination of such concepts as those of God, freedom, and immorality.

312. Philosophy in Literature. (AS) Spring (3) Staff. (Not offered in 1977-78.)

A study of perennial philosophic problems such as the nature and destiny of man, evil, freedom, and God through contemporary and classical literature. Classroom discussion and some written commentary explore philosophic implications in literary works such as *Steppenwolf*, *Bhagavad Gita*, *Magister Ludi*, *The Divine Comedy*, and *The Stranger*.

313. Introduction to the Philosophy of Science. (AS) Fall (3) Staff. (Not offered in 1977-78.)

A philosophical examination of the nature, validity, and significance of scientific inquiry. Special attention will be given to the descriptive, explanatory, and predictive aspects of scientific theories.

314. Philosophy of the Social Sciences. (S) Spring (3) Staff (Not offered in 1977-78.)

An examination of theories and methods in the social sciences. A comparison with the natural sciences through consideration of such philosophic topics as the nature of explanation, concept formation, confirmation of theories, the relation of facts to values, the nature of human action, freedom and determinism, and moral issues involved in applied social science.

315. Philosophical Issues in Medicine and Health Care. (AS) Fall (3) Belgum. *Prerequisites: Philosophy 303 or 305.*

An exploration of some ethical issues that arise in our complex contemporary system of health care. Topics will include: justice and efficiency in the allocation of health care resources; paternalism, autonomy and respect in the doctor/patient relationship; human experimentation; the doctor and the dying patient; special issues in women's health care.

321. Existentialism (S) Fall and Spring (3) McLane. *Prerequisites: Two courses in philosophy or consent of the instructor.*

An examination of important aspects of existentialism with readings in such philosophers as Kierkegaard, Nietzsche, Heidegger, and Sartre. Some attention will also be given to the impact of these philosophical movements upon contemporary literature, religious thought, and psychology.

322. American Philosophy. (S) Fall (3) Reed. *Prerequisites: Two courses in philosophy or consent of the instructor.*

A study of readings selected from the works of such philosophers as Edwards, Jefferson, Peirce, Royce, James, Dewey, Santayana, and Whitehead.

323. Indian Philosophy. (S) Fall (3) Foster. *Prerequisites: Two courses in philosophy or consent of the instructor.*

A survey of the major philosophers and systems of thought in South Asia. The cultural, philosophical and religious background is approached through consideration of the

PHILOSOPHY

Upanishads and Bhagavad-Gita. Study is devoted to such systems as Jainism, early Buddhism, Samkhya-Yoga, Nyaya-Vaisesika, and Vendanta.

324. Oriental Philosophy. (S) Spring (3) Foster. *Prerequisites:* Two courses in philosophy or consent of the instructor.

A study of the major philosophers and systems of thought in East Asia. Study will be devoted to the I Ching, Confucius, Mo Tzu, Mencius and Taoism and to the development of Mahayana, Tibetan and Zen Buddhism.

331. Greek Philosophy. (S) Fall (3) Fuchs. *Prerequisites:* Two courses in philosophy or consent of the instructor.

A critical examination of representative Greek philosophers with special emphasis on Plato and Aristotle.

332. Medieval Philosophy. (S) Spring (3) Reed. *Prerequisites:* Two courses in philosophy or consent of the instructor.

Analysis of selected writings of major medieval philosophers such as Augustine, Erigena, Anselm, Maimonides, Bonaventure, Aquinas, Duns Scotus, and Occam.

336. Contemporary Philosophy. (S) Fall (3) Angene. *Prerequisites:* Two courses in philosophy or consent of the instructor.

An examination of the major philosophical writings of 20th century analytic philosophers such as Russell, Ayer, Austin and Wittgenstein.

350, 351. Modern Philosophy. (S) Fall and Spring (3, 3) Jones. *Prerequisites:* Two courses in philosophy or consent of instructor. (350 not offered 1977-78)

A critical examination of the major figures in Modern Philosophy. The first semester will concentrate on the rationalists (Descartes, Spinoza, and Leibniz) and the beginnings of empiricism (Locke). The second semester will continue examination of empiricism (Locke, Berkeley, and Hume) and Kant's critical reaction to these traditions.

401. Theory of Knowledge. (S) Fall (3) Staff. *Prerequisites:* Four courses in philosophy or consent of instructor. (Not offered 1977-78.)

An examination of philosophical theories about such topics as the nature and criteria of truth, perception and cognition, meaning, knowledge, and the validation of belief.

402. Metaphysics. (S) Fall (3) McLane. *Prerequisites:* Four courses in Philosophy or consent of instructor.

A study of such concepts as those of substance and essence, time and eternity, matter and consciousness, truth, cause, and being. Critical examination of theories about such topics as mechanism, and teleology, man and his place in nature, and the relation of the mind to the body.

403. Advanced Ethics. (S) Spring (3) Jones. *Prerequisites:* Philosophy 303 and three other courses in philosophy or consent of instructor.

A study of selected normative and theoretical problems in moral philosophy such as the justification of ultimate moral principles, act and rule utilitarianism, theories of social justice, and freedom and moral responsibility.

404. Advanced Logic. (S) Spring (3) McLane. *Prerequisites:* Philosophy 301 or consent of the instructor.

Systematic investigation of topics in logic drawn from such areas as system construction, proof theory, modal and deontic logic, and abstract set theory.

405. Phenomenology. (S) Spring (3) Staff. *Prerequisites:* Philosophy 321 and three other courses in philosophy.

A study of phenomenology as a philosophical method. The readings will include some

PHILOSOPHY

literary and psychological materials as well as the philosophical writings of such figures as Husserl, Heidegger, and Merleau-Ponty.

406. Philosophy of Language. (S) Spring (3) Angene. *Prerequisites: Philosophy 301 or 336 and two other courses in philosophy.*

A survey of recent philosophical questions about language and meaning. Such topics as the following will be considered: reference, analyticity, speech acts, and semantic and syntactic theories. Among the authors that will be read are Russell, Austin, Quine, Chomsky and Katz.

413. Philosophy of Mind. (S) Fall (3) Jones. *Prerequisites: Philosophy 101, 102 or consent of instructor.*

Critical analysis of theories concerning the nature of consciousness, the concept of person and personal identity, and some theories of the relation of the mind to the body. Attention will be devoted to the philosophical relevance of such sciences as psychology, physiology, and cybernetics.

416. Philosophical Problems in Physical Science. (S) Spring (3) Staff. *Prerequisites: Either Philosophy 301 or Physics 101, 102 or consent of the instructor. (Not offered 1977-78)*

A study of philosophical problems arising in classical physics and relativity and quantum theory. Special attention will be given to such topics as the status of observables, measurement, time, and elementary particles. The philosophical implications of contemporary physics will be discussed. (Same as Physics 416)

418. Foundations of Mathematics. (S) Spring (3) Staff. (Not offered 1977-78)

A study of naive set theory, some paradoxes which it generates, and a variety of ways of eliminating the paradoxes. A non-naive set theory will be studied through the development of cardinals, ordinals, the axiom of choice and some of its equivalents. Some attention will be paid to the Gödel/Cohen work on the axiom of choice and the continuum hypothesis. (Same as Mathematics 418)

420. Concepts of Mind: Conscious and Unconscious. (S) Spring (3) Staff. (Not offered 1977-78)

An interdisciplinary seminar on the philosophical and empirical issues raised by theories of unconscious mental states and processes and their relationships to consciousness. (Same as Psychology 420)

422. Great Philosophers. (S) Spring (3) Staff. *Prerequisites: Philosophy 336 or 301 and three other courses in philosophy. (Not offered 1977-78)*

A systematic study of the thought of a great philosopher such as Descartes, Spinoza, Hume, or Wittgenstein. The particular philosopher to be studied is designated each time the course is offered.

424. The Philosophy of Plato. (S) Spring (3) Belgum. *Prerequisites: Philosophy 331 or consent of the instructor.*

A critical examination of selected dialogues of Plato. Some attention will be given to literary as well as philosophical modes of analysis. Special emphasis will be placed on the significance of Plato's thought for contemporary philosophic issues. (This course will be offered every other year, alternating with Philosophy 426.)

426. The Philosophy of Aristotle. (S) Spring (3) Staff. *Prerequisites: Philosophy 331 or consent of the instructor. (Not offered 1977-78)*

An intensive study of selected passages from Aristotle's works, such as the Posterior Analytics, Physics, Metaphysics, De Anima, Nicomachean Ethics, Politics, and Poetics. Special emphasis will be placed on the significance of Aristotle's thought for contemporary philosophical issues. (This course will be offered every other year, alternating with Philosophy 424.)

PHYSICAL EDUCATION

431. Advanced Seminar in Philosophy. (S) Fall (3) Staff. (Not offered Fall 1977)

Special advanced topics of interest to faculty and students will be discussed in seminar fashion. Students in the course are expected to write and present papers for discussion.

432. Advanced Seminar in Philosophy. (S) Spring (3) Fuchs. Prerequisites: Senior standing or Juniors with either 303, 305, or 310.

A philosophical analysis of the nature, justification, and application of moral and legal rights. Both historical and contemporary theories will be studied, and recent judicial opinions will receive special attention.

#441, 442. Independent Study in Philosophy. Fall and Spring (3, 3) Staff. Prerequisites: senior standing or eight courses in philosophy, and departmental approval prior to registration.

Individually supervised study of special topics.

#495, 496. Honors. Fall and Spring (3, 3) Staff.

See section on Departmental Honors Program for general requirements and procedure. A student wishing to do Honors work in philosophy should submit a written request to the chairperson two weeks in advance of pre-registration during the last semester of the junior year. The statement should include a description of the proposed project. If the project is tentatively approved the student will be assigned a temporary advisor. At the beginning of the first semester of the senior year (early in the add/drop period), the applicant must submit a four to six page double-spaced typewritten statement of the project for final approval before being admitted to Honors.

Students admitted to Honors Study will be enrolled in this course during both semesters of their senior year. The course comprises (a) supervised reading in the field of the student's major interest; (b) the preparation and presentation by April 15 of an Honors Essay; (c) the satisfactory completion of a written comprehensive examination based upon the student's courses of study; (d) the satisfactory performance in an oral examination on the Honors Essay.

Physical Education

Physical Education for Men: PROFESSOR H. SMITH (Chairman), ASSOCIATE PROFESSORS AGEE, HOOKER, JENSEN, JONES and LINKENAUER. ASSISTANT PROFESSORS ALBERT, DER-RINGE and HAYNIE. INSTRUCTORS GAUTHIER and STEERS.

Physical Education for Women: ASSOCIATE PROFESSORS WEST (Chairman), ARCHER, CROWE, LAMBERT, ROBY, SHERMAN, and TOMLINSON. ASSISTANT PROFESSORS JACKSON, PORTER, SCHEIBNER, and SHIRLEY. INSTRUCTOR HILL. COLLEGE PHYSICIAN CILLEY.

To meet the requirements for an A.B. or B.S. degree, a student must acquire four semester credits in a physical education program. Each of the four requirements may be satisfied by electing a semester course in an activity offered by the departments of Physical Education, by participating for a season in a varsity sport, or by passing one of the skills tests offered. Before completing four semesters, students are to demonstrate survival swimming skills unless medically excused. Opportunities to demonstrate these skills are offered in the fall and spring of each academic year. It is recommended that a student begin this program in his first semester of residence and continue in the program until the requirement has been satisfied.

REQUIREMENTS FOR CONCENTRATION

The minimum number of semester credits required for concentration in Physical Education is 34 and must include Physical Education 204, 308, 394, 408, 411, Biology 307 and 308.

PHYSICAL EDUCATION

Those students desiring to meet the professional requirements for certification in the State of Virginia should plan their programs with Mr. Linkenauger. Students enrolling in professional courses to meet certification requirements in other states should first consult a member of the faculty of the School of Education.

Students who meet professional requirements for certification in the State of Virginia are qualified for a number of positions: teaching Physical Education in a consolidated school or a large secondary school; teaching Physical Education and a second subject in a small secondary school; coaching and directing athletics combined with the teaching of another subject or subjects; supervising physical education and recreation programs; summer camp work; and preparation for graduate study in Physical Education, Physical Therapy or Corrective Therapy.

PROGRAM FOR ADVANCED STUDY

Students who are qualified for advanced study and who have satisfied admission requirements may register for the Master of Arts in Secondary Education with Physical Education as a related field. A minimum residence period of one regular session or of four summer sessions is required.

In addition to the general requirements for admission established by the College, students desiring to enter upon graduate study in Physical Education should present satisfactory undergraduate work in Physical Education or related fields, from a recognized institution.

A minimum of 15 credits of the total 33 submitted for the Master of Arts in Secondary Education degree must be in the department of concentration. Other courses should be selected from related departments such as Education, Sociology and Biology, or selected from additional courses in Physical Education. For special requirements of the M.Ed. degree, write to the Dean of the School of Education.

DESCRIPTION OF COURSES

Students concentrating in other departments may elect physical education courses according to interest or to prepare for teaching combinations, recreation work, or other related fields.

101. Team Sports. *Fall and Spring* (1) Mr. Agee, Mr. Albert, Miss Archer, Miss Crowe, Miss Hill, Mr. Hooker, Mr. Jensen, Mr. Parkhill, Miss Porter, Miss Scheibner.

Seasonal activities: hockey, basketball, football, men's lacrosse, women's lacrosse, soccer, softball, and volleyball. Two double periods weekly.

102. Dance. *Fall and Spring* (1) Miss Roby, and Mrs. Sherman.

Fundamentals of modern dance. Two double periods weekly.

#145, 146. Adapted Activities. *Fall and Spring* (1) Mrs. West.

Upon recommendation of the head of the Department and the College physicians, these courses may be substituted for regular classes.

#195, 196. Selected Sports and Dance Activities. *Fall and Spring* (1) Mrs. West.

Upon recommendation of the head of the Department, these courses (designed for proficient students) may be substituted for regular classes.

201. Swimming. *Fall and Spring* (1) Miss Crowe, Miss Hill, Mrs. Jackson, Mr. Jensen, Miss Lambert, Miss Porter, Mr. Smith, Miss Tomlinson, Mr. Watson, Mrs. West.

Safety skills, standard swimming strokes and diving are offered at the beginning, elementary, and intermediate levels. Life saving techniques, water safety instructors, scuba, and aquatic art are also offered. Two double periods. Weekly.

202. Individual Sports. *Fall and Spring* (1) Mr. Agee, Mr. Albert, Miss Archer, Mr.

PHYSICAL EDUCATION

Berryhill, Miss Crowe, Mr. Gauthier, Mr. Hamada, Mr. Haynie, Miss Hill, Mrs. Jackson, Mr. Jones, Miss Lambert, Miss Porter, Miss Scheibner, Miss Shirley, Mr. Spack, Mr. Steers, Miss Tomlinson, Mrs. West.

Seasonal activities: Aerobics, archery, backpacking, badminton, body mechanics, bowling, white water canoeing¹, canoe camping¹, cycling, fencing, golf, gymnastics, handball, horseback riding¹, jogging for fitness, karate¹, judo¹. Techniques of self defense¹, skiing in New England¹, tennis, track and field, winter camping in the Adirondacks¹, weight training, wrestling. Two double periods weekly.

203. Physical Education and Recreation for the Classroom Teacher. *Fall and Spring* (3) Mr. Agee, Miss Crowe.

Special emphasis given the role of motivation, skill transfer and retention as applied to physical education. Course primarily designed to emphasize fundamentals of basic skills, physical fitness testing, and individual and team activities on the elementary school level.

204. Introduction to Health, Physical Education and Recreation. *Fall* (3) Staff.

An introduction to the study of the broad areas of Health, Physical Education and Recreation with emphasis upon historical, philosophical and sociocultural development of the field. It includes an introduction into biomechanical and psychological aspects of human movement.

208. Safety Measures, Emergency Care and Treatment. *Fall and Spring* (3) Mr. Jensen.

Instruction includes advanced emergency care techniques and safety measures. Content focuses on American Red Cross Advanced First Aid and Emergency Care in conjunction with local hospital and emergency medical services. Safety projects and techniques are developed.

302. Waterfront Leadership. *Spring* (2) Mrs. West and Miss Lambert. *Prerequisite: Senior Life Saving.*

Especially designed for students who wish to do camp and playground work and includes Instructor's courses of the American Red Cross. Four class and laboratory.

307. Health and Physical Education for Elementary Classroom Teaching, K-6. *Fall and Spring* (4) Mr. Agee and Miss Crowe.

Includes methods and materials for teaching Health and Physical Education to elementary school children. Special emphasis is on basic understanding of movement patterns, motor control, and skill development, and the significance of an individual child's motor development. Included also is an examination of health needs and safety practices which will help to develop competencies and insight in meeting today's health problems. Laboratory hours include teaching physical education classes in elementary schools. Four class and four laboratory hours.

P.E. 307 and P.E. 321 and P.E. 207 and P.E. 203 may not both be taken for credit. P.E. 307 will meet state certification requirements for elementary education concentrators.

308. Applied Anatomy and Kinesiology. *Fall* (3) Mr. Linkenauger. *Prerequisite: Biology 308.*

A study of the principles of human motion. Anatomical and mechanical analysis of individual skills in physical education activities is stressed.

309. Driver Education². *Fall or Spring* (3) Mr. Jones.

Critical analysis of traffic accidents attitude factors, and essential knowledges are developed. The laboratory phase will include the use of psychophysical and psychologi-

¹Fees are charged for these courses.

²While this course may be taken to fulfill the requirement for Virginia State Certification in Driver Education, it may not be counted toward meeting requirements for the A.B. or B.S. degree.

PHYSICAL EDUCATION

cal tests and actual practice-teaching behind the wheel. Lectures and laboratories four hours.

313. Advanced Gymnastics and Track & Field Spring (2) Mr. Gauthier and Mr. Berryhill.

A detailed study and development of demonstrable skills with considerable emphasis on exhibition planning and coaching techniques in the course design. *Lectures and laboratories four hours.*

316. Advanced Baseball, Wrestling. Spring (2) Mr. Jones and Mr. Steers.

This course is structured so as to give special attention to the approved scientific techniques of coaching and the students' acquisition of advanced demonstrable skills. *Lectures and laboratories four hours.*

317. Theory and Practice of Coaching Soccer and Lacrosse. Fall (2) Mr. Albert. *Lecture and laboratories four hours.*

A detailed study of the advanced basic skill techniques and coaching methods utilized in Soccer and Lacrosse.

318. Sports Officiating. Fall and Spring (2) Mr. Jones.

A survey and critical analysis of the rules and officiating techniques of team and individual events. A minimum of twelve contact hours of supervised intramural officiating is required. *Lectures and laboratories four hours.*

321. Foundations of Health Education. Fall and Spring (3) Mr. Smith.

An advanced course which develops instructional competencies with special emphasis on the historical as well as the most recent health facts, principles and concepts. A survey is made of the many Virginia State Department publications and other resource materials.

394. Tests and Measurements in Health, Physical Education and Recreation. Fall (3) Mr. Jones.

Evaluation techniques are studied with emphasis placed on tests of physical performance, body mechanics, and growth. The basic tools of statistical analysis used by the physical educator will be studied.

400. Senior Seminar. As required (3) Staff.

Discussion by the faculty and advanced students of contemporary problems in physical education. Students will write and present papers for critical discussion. Guest lecturers will occasionally present seminars.

408. Organization and Administration of Health and Physical Education Programs. Spring (3) Mr. Smith.

This course provides counsel on organizational and administrative policies and procedures for physical education, health, and intramural programs in the public schools.

409. Organization and Administration of Community Recreation Programs. Spring (2) Mr. Jones.

This course is concerned with the administrative and legal aspects of local, state and federal recreation programs.

411. Therapeutic Physical Education. Fall (3) Mr. Smith and Mr. Linkenauer. *Prerequisite: Biology 308.*

Basic concepts examined in this course include physical examination procedures with an emphasis on normal and faulty postural conditions. Special attention is given to remedial and adaptive exercises and activities. Physical and corrective therapy techniques and procedures are studied.

PHYSICAL EDUCATION

412. Advanced Football and Basketball. *Fall or spring* (2) Mr. Agee.

A detailed study and development of advanced demonstrable skills with special emphasis on coaching techniques is the purpose of this course. *Lecture and laboratories four hours.*

413. Advanced Tennis and Golf. *Fall or Spring* (2) Mr. Agee.

This is a course to further develop the students' competencies and demonstrable skills with emphasis on coaching procedures and tournament management. *Lecture and laboratories four hours.*

414. Basic Aquatics. *Fall, Spring* (2, 2) Mr. Jensen.

Course designed to develop appreciation of aquatic skills with emphasis on basic swimming techniques, competition, organization, and pool management.

415, 416. Student Teaching. *Fall and Spring* (3) Mr. Smith. Prerequisites: Senior Standing, twenty-four credits in *Education and Physical Education*.

This course involves daily observation and teaching in a public school system with weekly conferences, special assignments and reports. *Lectures and laboratory five hours.*

491. Physical Modalities and Rehabilitation Techniques. *Fall* (3) Mr. Linkenauger. Prerequisite: *Biology 307, 308.*

A detailed inquiry into modalities currently employed in physical therapy and rehabilitation.

492. Physiology Activity. *Spring* (3) Mr. Linkenauger. Prerequisite: *Biology 308.*

An in depth study of the physiological aspects of exercise, fatigue, coordination, training, and growth; functional tests with normal and abnormal subjects; investigations and independent readings.

493. Philosophy and Literature in Health, Physical Education and Recreation. *As Required* (3) Mr. Jensen.

Extensive readings, discussions and evaluations of historical and current philosophies and practices are made. Educational implications of problems of facing the separate fields are analyzed.

497. Health Coordination. *As Required* (3) Mr. Smith.

A comprehensive study is made of the factors of school and community activities related to health. Relationships of the service, instructional, protective, and guidance phases in the health program are identified.

502. Problems and Research in Health, Physical Education and Recreation. *As required* (3) Mr. Smith. Prerequisite: *Physical Education 494 or the equivalent.*

This course includes the application of various methods and statistics as most commonly used in physical education research. Limited research studies and problems are conducted in the three areas.

503. Seminar in Advanced Techniques in Sports. *As required* (3) Staff.

Particular attention is given to performance traits, conditioning and strength development for athletic and physical education activities. Each student is involved in independent study directed toward his special interest.

506. Administration and Supervision in Physical Education, Health and Recreation. *As Required* (3) Mr. Smith.

Study is given to administrative management and supervision in all three areas, modification of programs to fit the facilities available, curriculum planning, grading procedures and techniques of instruction.

PHYSICAL EDUCATION

ELECTIVE COURSES IN DANCE

ASSOCIATE PROFESSORS ROBY and SHERMAN.

These courses supplement the required courses in Physical Education and may be elected for academic credit by men and women with the consent of the instructor. The area requirement under Area 1 can be fulfilled by selecting six hours from Dance 220, 305 and 306. The sequence requirement under Area 1 can be fulfilled by selecting twelve hours from Dance 220, 305, 306, 311, 312, 315, 405 and 406.

Courses may also be taken to form an interdisciplinary concentration in Dance and a related field or fields.

DESCRIPTION OF COURSES

TECHNIQUE. These courses are designed to develop an understanding of movement as an art form and means of expression, beginning with movement fundamentals and continuing through longer and more complex phases with emphasis on performance. Students will be assigned to the course for which they are qualified on the basis of previous background and demonstrated ability. A maximum of 12 credit hours may be earned in Technique.

111, 112. Elementary Modern Dance Technique. *Fall and Spring (2, 2) Staff. Four studio hours.*

Requires permission of the instructor.

211, 212. Intermediate Modern Dance Technique. *Fall and Spring (2, 2) Staff. Four studio hours.*

Requires permission of the instructor.

311, 312. Advanced Modern Dance Technique. *(S) Fall and Spring (2, 2) Staff. Four studio hours. Credit can be earned in each of these courses twice.*

Requires permission of the instructor.

220. Introduction to Contemporary Dance. *(A) Spring (3) Mrs. Sherman.*

An introduction to the field of Modern Dance with emphasis on the stylistic approach and aesthetic of the artists who have contributed to its development in the twentieth century.

305, 306. Dance Composition. *(A) Fall and Spring (3, 3) Miss Roby. Prerequisite: Physical Education 102.*

First Semester: An introduction to the elements, materials and structure of a dance composition. *Four class and laboratory hours.*

Second Semester: Composition of dance etudes; form and style related to other modern arts. *Four class and laboratory hours.*

315. Group Choreography. *(S) Fall (3) Mrs. Sherman.*

Studies geared to develop an understanding of the principles in choreographic invention for small groups and large ensembles. *Prerequisites: Dance 305 and 306.*

405, 406. Problems in Dance. *(S) Fall and Spring. (3) Miss Roby and Mrs. Sherman.*

Directed study in a special area for the advanced student arranged on an individual basis. Each semester includes a substantial choreographic project or a research project for a student with special interest and ability in a related field, such as music, theatre, or fine arts. Requires permission of the instructor.

Physics

PROFESSORS VON BAEYER (Chairman), CROWNFIELD, ECKHAUSE, FUNSTEN, GROSS, MCKNIGHT, MONTGOMERY, PERDRISAT, REMLER¹, SCHONE, SHER, SIEGEL, WELSH, and WINTER. ADJUNCT PROFESSOR ORTEGA. ASSOCIATE PROFESSORS CARLSON¹, CHAMPION, DELOS, DOVERSPIKE¹, KANE, KOSSLER, PETZINGER, and SOEST¹. ASSISTANT PROFESSOR VAHALA. RESEARCH ASSISTANT PROFESSOR PARK. RESEARCH ASSOCIATES LU, MORIARTY, and PANDEY. LECTURER JOLLY. RESEARCH ENGINEER HUMMEL.

PROGRAM

Traditionally, many physics undergraduates continue in graduate school in pursuit of Ph.D. degrees. However, students who complete a physics concentration also enter a variety of other fields, including among many others, archeology, biology, mathematics, law, medicine, environmental sciences, operations research, technical sales, industrial management, engineering, and oceanography. Undergraduate work in physics followed by specialization in other areas has become one of the preferred preparations for many activities that are setting new directions in our changing world because physicists are scientific generalists. The requirements for concentration in physics are deliberately flexible, and are designed to prepare people for either graduate work in physics or for later specialization in other areas.

A minimum of 30 credits, including not more than eight in 100-level courses and not more than three courses numbered 416-22, is required for a concentration in physics. Either physics 451-452 or physics 495-496 must be completed, so that all majors engage in independent research during their senior year. Because of the extensive facilities available through the graduate program of the department, the senior projects generally deal with problems at the frontiers of physics. It is only through being actively involved in such pursuits that a student can appreciate the nature of the discipline.

Students who want to become physicists should be prepared in such a way that they can succeed in the best graduate schools. The following statements are advice appropriate to such students:

Physics 101-102 and calculus should be taken during their freshman year.

Physics 201-202 and 251-252 should be included in the sophomore year.

Physics 301-302, 313, 314, 401 and selections from 351-352, 402, 403-404, 475, 481 and 482 should be completed during the junior and senior years.

Suitable mathematics courses should also be included.

Those seeking a less detailed preparation should include 301 but consider taking 260 rather than 401.

Courses on special topics in physics are offered as Freshman Colloquia.

DESCRIPTION OF COURSES

101-102. General Physics. (A) *Fall and Spring* (4, 4) Mr. Welsh and Staff.

This course is designed to develop an understanding of the fundamental concepts of physics. Emphasis is placed upon Newtonian mechanics, electricity and magnetism and modern physics; current research and applications are discussed. Designed for students who are considering concentrating in one of the sciences or mathematics. Concurrent registration in calculus is recommended. Honors sections are open to students that have a good preparation for and a strong interest in physics. Lectures, discussions, and laboratory six and one-half hours.

103-104. Physics for non-science concentrators (A) *Fall and Spring* (4, 4) Mr. Perdrisat and Staff.

The course examines how science shapes the world and our vision of the world. Mechanics, light, and electricity, including lasers, electronic instruments, and other devices in the first semester. Introduction to relativity, quantum phenomena, and new

¹On leave 1977-78.

PHYSICS

ideas about atoms and particles in the second semester. Designed for the non-science concentrator; Area III concentrators must obtain permission from the instructor to enroll. *Lecture three hours, laboratory three and one half hours.*

121. Physics of Music. (A) Fall (3) Mr. Funsten.

Basic concepts of physics, particularly acoustics, needed for an understanding of the properties of sound and music. The course will be in the form of a workshop—students will participate in the performance of experiments which illustrate the ideas. *Lecture and laboratory three hours.*

150. Freshman Colloquium.

175. Development of Physics and Cosmology. (A) Fall and Spring (3) Mr. Gross.

The evolution of ideas on the structure of the universe with particular attention to the scientific revolutions from the time of the Renaissance to Einstein. Critical study of the role of imagination, observation, and prediction in the development of physical theories. Examination of the interplay between physical theories and contemporary society.

176. Introductory Astronomy. (A) Fall and Spring (3) Mr. von Baeyer.

Descriptive study of the solar system; theories of the origin of the solar system. Star classification; descriptive studies of star clusters and galaxies. Recent developments such as quasars, pulsars, neutrino astronomy and radio astronomy. Current theories of the origin of the universe.

201. Modern Physics (S) Fall (3) Mr. Champion. *Prerequisites: Physics 101-102.*

Twentieth century developments in physics. Relativity theory: the nature of space and time, the paradox of the twins, the equivalence of mass and energy. Introductory Quantum theory: the particle nature of light, the wave nature of electronics, atomic and molecular structure, the structure of the nucleus and the discovery of new particles. This course is appropriate for all those majoring in Area III.

202. Waves (S) Spring (3) Mr. Champion. *Prerequisites: Physics 101-102.*

Classical theory of waves—sound, light and water waves—reflection, refraction, interference and diffraction of waves; elementary electronic circuits and optical instruments.

251. Experimental Atomic Physics. (S) Fall (1) Mr. Perdrisat. *Corequisite: Physics 201.*

Fundamental experiments in atomic physics. Modern scientific methods and instruments are used in such classical experiments as the measurement of the speed of light, the Millikan oil drop experiment, the photo-electric effect and optical spectroscopy. *Laboratory three hours.*

252. Electronics I. (S) Spring (1) Mr. Funsten and Staff. *Corequisite: Physics 202.*

Introduction to passive analysis and electrical networks. Application of circuit analogs to mechanical systems, including wave motion. *Laboratory three hours.*

260. Introduction to Electronics. (S) Spring (3) Staff. *Prerequisites: Physics 101-102 or 103-104.*

Principles of electricity and magnetism needed to understand simple circuits. Applications to instrumentation encountered in a laboratory. Semiconductor devices and their application to computers. Control circuits and their uses in models for biological systems. Electromagnetic waves; light from infra-red to ultra-violet. Radio waves and antennas. X-rays and crystal structure. May not be counted for concentration in physics by students who take Physics 401. *Lecture two hours; laboratory two hours.*

265. Energy and the Environment. (S) Fall (3) Mr. McKnight. *Prerequisites: Physics 101-102 or 103-104.*

PHYSICS

A study of the physics of energy production, transmission and use with consideration of the social and environmental impacts of choosing particular technologies. Assessment of alternative solutions to the problem of energy for the future. May not be counted toward concentration in physics. (Offered in alternate years. Not offered in 1977-78.)

266. Environmental Physics: Pollution, Transportation and Resources. (S) Spring (3) Mr. McKnight. Prerequisites: *Physics 101-102 or 103-104.*

An investigation of the physical phenomena associated with current environmental problems: atmospheric and water pollution, transportation, noise, and recycling of resources. Descriptive and quantitative analysis of the environmental impact of planned and proposed changes in our way of life. May not be counted toward concentration in physics. (Offered in alternate years. Not offered in 1977-78.)

301-302. Classical Mechanics. Fall and Spring (3, 3) Mr. Kane. Prerequisite: *Physics 201-202.*

Plane mechanics, mechanics in three dimensions, Lagrangian and Hamiltonian mechanics, special relativity and the mechanics of continuous media.

313-314. Introduction to Quantum Physics. Fall and Spring (3, 3) Mr. Winter. Prerequisite: *Physics 201-202.*

Introduction to non-relativistic quantum mechanics, emphasizing basic principles with illustrations from atomic, solid state and nuclear physics.

351. Electronics II. Fall (1) Mr. Kossler and Staff.

Design and construction of active circuits and devices used in experimental research. Laboratory three hours.

352. Experimental Modern Physics. Spring (1) Mr. Kossler and Staff.

Experiments in atomic, nuclear, solid state and elementary particle physics. Laboratory three hours.

401-402. Electricity and Magnetism. Fall and Spring (3, 3) Mr. Eckhause. Prerequisite: *Physics 301.*

Development of the theory of electricity and magnetism from fundamental principles. Maxwell's equation, electromagnetic waves and radiation.

403. Thermodynamics and Introduction to Statistical Mechanics. Fall (3) Mr. Sher. Prerequisite: *Physics 201.*

The principles of thermodynamics, kinetic theory of gases, and elementary statistical mechanics.

404. Quantum Physics. Spring (3) Mr. Winter. Prerequisite: *Physics 313-314.*

The quantum theory in its application to atomic, solid state, nuclear and elementary particle physics.

416. Philosophical Problems in Physical Science. Spring (3) Mr. McKnight. Prerequisites: *Two courses in physics or philosophy.*

A study of philosophical problems arising in experiment and theory in classical physics, quantum theory and relativity as to the status of observables, measurements, time and elementary particles. Philosophical implications of contemporary physics. (Same as Philosophy 416.)

417. History of Physical Science: Its Origins, Sixth Century B.C., through the Renaissance. Fall (3) Mr. McKnight.

A study of the Greek and Hellenistic endeavors to explain observed physical phenomena, of Arab Science in the Middle Ages, of the revival of academic science during the rise of the European Universities, and of the Renaissance beginnings of modern physics and astronomy. (Same as History 481.)

PROJECT PLUS

418. History of Physical Science: The Classical Period, 1687-1900. *Spring* (3) Mr. McKnight.

A study of the development of the physical sciences after the publication of Newton's Principia. Emphasis will be placed on influences acting on and within the scientific community, on the impact of science on the institutions of society, and on the interrelations between the development of science and that of mathematics and philosophy. (Same as History 482.)

421-422. Law, Energy and the Environment. *Fall and Spring* (3, 3) Mr. Champion and Mr. Whitney. Prerequisites: *One year of college science and consent of instructor.*

The U.S. environmental reform establishment; energy and thermodynamics; selected environmental reform legislation; the scientific and legal problems associated with nuclear power; atmospheric physics. The inadequacy of traditional common law remedies to reform the environment; anatomy of an environmental lawsuit; alternate energy sources; energy use patterns; environmental planning; legal and technical aspects of solid waste and resource recovery, pesticides, and noise. (Not offered in 1977-78.)

451-452. Physics Research. *Fall and Spring* (1-3, 1-3) Mr. Sher and Staff.

Independent study consisting of both bibliographic and experimental research.

475. Introduction to Mathematical Physics. *Fall* (3).

Vector analysis, complex variables, matrices, series solutions of differential equations, orthogonal functions and partial differential equations. This course does not carry undergraduate credit in Physics.

481. Topics in Physics. *Fall* (3) (to be arranged) Staff.

482. Topics in Physics. *Spring* (to be arranged) Staff.

495-496. Honors. *Fall and Spring* (3, 3) Staff.

Students admitted to Honors Study in Physics will be enrolled in this course during both semesters of their senior year. Each candidate will be responsible for (a) reading and discussion of a selected list of books in some specific area of the literature of physics; (b) the preparation and presentation by April 15 of an Honors Essay based on his own research or his part of a major research project; (c) satisfactory completion of a comprehensive oral examination on the essay and related topics.

GRADUATE PROGRAM

The department offers the degrees of Master of Arts, Master of Science, and Doctor of Philosophy. For degree requirements, and a full description of graduate courses in physics, write to the department chairman for a Graduate Catalog.

Project Plus

PROFESSOR BEYER (Director)

Project PLUS is an academic and residential program in which all of the 84 participating students reside in the Project building for one year and take part of their academic work together. The Forum and the tutorials offered for the 1977-78 session all center on the theme selected for this year—Revolution.¹ The Forum, which all participating students and faculty attend, provides a wide and sweeping approach to the

¹For information on general objectives, see page 53. Brochures are available on request from the Directors of Honors and Experimental Programs.

PROJECT PLUS

theme through various kinds of programs including the lecture, debate, film, panel, dance, drama, etc. The tutorials, which are also generally interdisciplinary in nature, are more limited in scope. They are taught by instructors from the different departments.

Each student registers in the single weekly Forum and each semester in one tutorial thereby earning four elective credits for this combined enrollment. Students are graded by their instructors on a Pass/Fail basis. A junior or a senior by his enrollment in Project PLUS will thereby utilize the Pass/Fail option available to him as a junior or a senior whichever the case may be. A sophomore enrolled in Project PLUS will continue to have the option of taking two courses on a Pass/Fail basis when he becomes a junior and a senior.

1977-78 THEME: REVOLUTION

201, 202. Forum. Mr. Beyer, Director.

201T-1. Ideology and Revolution (*Fall*) (4) Mr. D. Jones.

201T-2. Biological Revolutions and Their Impact on Society (*Fall*) (4) Mr. Coursen.

201T-3. Courtly Love: A Twelfth Century Sexual Revolution? (*Fall*) (4) Mr. Monson.

201T-4. Radical Perspectives on Contemporary Society (*Fall*) (4) Mr. Faia.

201T-5. Revolutionary Russia: Continuity or Change? (*Fall*) (4) Mr. McArthur.

201T-6. Black Revolution: the Struggle for Negro Rights in the United States (*Fall*) (4) Ms. Walker.

201T-7. Literary Revolutions: Inner-Outer (*Fall*) (4) Mr. Cloud.

201T-8. Revolution and Economics (*Fall*) (4) Mr. Strauss & Mr. Sanderson.

201T-9. TBA (*Fall*) (4).

201T-10. TBA (*Fall*) (4).

202T-1. Religion and Revolutionary Consciousness (*Spring*) (4) Mr. Livingston.

202T-2. The French Renaissance: Literary Evolution or Revolution? (*Spring*) (4) Mr. Hallett.

202T-3. Political and Social Revolution as Reflected in German Literature (*Spring*) (4) Mr. Eger.

202T-4. Third World Revolutionaries: the Cases of Mahatma Gandhi, Mao and José Rizal (*Spring*) (4) Mr. Zamora.

202T-5. English Contemporary Reaction to the French Revolution (*Spring*) (4) Mr. Maccubbin.

202T-6. Contrasting Perspectives on Revolution (*Spring*) (4) Mr. Rhyne.

202T-7. Literary Revolutions: Inner-Outer (*Spring*) (4) Mr. Cloud.

202T-8. TBA (*Spring*) (4).

202T-9. TBA (*Spring*) (4).

202T-10. TBA (*Spring*) (4).

204. Independent Study (*Spring*) (2). The opportunity for a limited number of students to undertake independent study related to the theme of "Revolution".

Psychology

PROFESSORS HARCUM (Chairman), CHAMBERS, DERKS, FRIEDMAN, JOHNSTON, McKENNA, and WILLIAMS. ASSOCIATE PROFESSORS ROSEN, SHAVER, SHEAN, and VENTIS. ASSISTANT PROFESSORS HARTLEY, NULL, and WATSON. LECTURERS BLOCH, CARDI, HAM-MACK, ONDERCIN, and SCHMIDT.

REQUIREMENTS FOR CONCENTRATION

Degree of Bachelor of Arts: A minimum of 27 credits in the Department is required for concentration in Psychology including 201 or 202, 331, 340, and one advanced research course (451-464). All students preparing for graduate study in psychology, whether or not they are concentrators, are advised to take additional research courses appropriate to their interest.

Degree of Bachelor of Science: Concentration requirements for the B.S. are those listed above for the A.B. but, in addition the student must meet area requirements for the B.S. degree (page 46). The preferred science is Biology.

Normal Program Recommended for Concentration: Psychology 201 and 202, 331, 340, one advanced research course (451-464), and a selection of intermediate and advanced courses appropriate to the student's interests and career goals.

DESCRIPTION OF COURSES

201. Principles of Psychology. (A) Fall (3) Mr. Friedman, Mr. Williams.

A study of basic principles of behavior; sensation and perception, conditioning and learning, drives and motivation, response mechanisms and cognitive processes. *Three hours lecture.*

202. Principles of Psychology. (A) Spring (3) Mr. Ventis, Mr. Watson.

An examination of basic concepts in abnormal, developmental, personality and social psychology; normality and deviation, behavior modification, identification, stages of development, personality traits, motives, attitudes and social perceptions. *Three hours lecture.*

203, 204. Laboratory in Introductory Psychology. Fall, Spring (1, 1) Mr. Derks, Mr. McKenna.

Elective laboratory to accompany Principles of Psychology 201, 202. Experience will include some traditional laboratory methods and some independent projects. This course is designed for students interested in concentration in Psychology, but because it is graded on a Pass/Fail basis it may not be included in the 27 hours required for concentration. Psychology 203 must be taken concurrently with Psychology 201; Psychology 204 must be taken concurrently with Psychology 202.

***211, 212. Introductory Research Seminar.** Fall, Spring (1, 1) Mr. Harcum, and Mr. Shean.

Taken with 201, 202 by selected students interested in extra study and independent scholarship. Enrollment by invitation only. Hours to be arranged.

INTERMEDIATE COURSES

Prerequisites: Psychology 201 or 202, and others as indicated.

331. Elementary Statistics. Fall, Spring (3, 3) Ms. Null, Ms. Rosen, and Mr. Friedman.

An introduction to statistics, both descriptive and inferential, including nonparametric tests of significance and simple correlation. Basic principles of psychophysics, psychometric functions and test theory. A brief introduction to hypothesis testing and decision theory. *Two class hours, two laboratory hours.*

340. Experimental Methods. (S) Fall, Spring (4, 4) Mr. Friedman, Mr. Harcum, and Ms. Null. *Prerequisite: Psychology 331.*

PSYCHOLOGY

An introduction to empirical research with emphasis upon the methods by which psychological data are obtained. The course will consider naturalistic and correlational methods as well as experimental techniques.

341. Educational Psychology. (S) Spring (3) Mr. Harcum.

Individual differences in learning, growth and development in the context of psychological methods and educational aims. May not be taken for credit by students who wish to apply credit for Education 301 toward a degree.

342. Industrial Psychology. (S) Spring (3) Mr. Williams.

Psychology applied to industrial and military organizations. Uses of psychological tests in selecting and classifying personnel; methods of efficient work; the design of machines and communication systems for human use.

351. Learning and Memory. (S) Fall, Spring (3) Mr. Derks.

An opportunity to engage in research and theorizing, with emphasis upon the ways of studying learning and memory.

352. Physiological Psychology. (S) Spring (3) Ms. Rosen.

Physiological basis of behavior with emphasis on mechanisms in perception, learning, emotion and motivation.

361. Abnormal Psychology. (S) Fall, Spring (3) Mr. Shean, Mr. Watson, and Staff.

A survey of behavior pathology including the neuroses and psychoses and their relationship to current conceptions of normal personality.

362. Developmental Psychology. (S) Fall, Spring (3, 3) Ms. Hartley.

A lifespan survey of human development, with emphasis on perceptual, cognitive, and social processes. A student may not apply both Psychology 362 and Education 302 toward the degree requirements of 120 total credit hours and 60 credit hours in residence.

363. Personality Theory. (S) Fall, Spring (3) Mr. Johnson and Mr. McKenna.

A survey of contemporary theory in the field, with emphasis upon its empirical foundations and future possibilities. A major project, such as an empirical study using autobiographical materials, may be a course requirement.

364. Social Psychology. (S) Fall, Spring (3, 3) Mr. Shaver.

This course examines the effects of social context on the behavior of the individual, with emphasis on prominent theories and research. Topics include social perception, attitude organization and change, the social consequences of individual motives, interpersonal influence, and the application of social psychology to contemporary social issues.

ADVANCED COURSES

Prerequisites: Psychology 201 or 202, and others as indicated.

401. Advanced Abnormal Psychology. Fall (3) Mr. Watson. *Prerequisite: Psychology 361.*

This course will consider psychoanalytic, Jungian, behavioral, rational-emotive, gestalt, and client-centered approaches to psychopathology and individual therapy.

***402. Day Care for Exceptional Children** (S) Fall, Spring (3, 3) Ms. Hartley, and Mr. Shean.

A consideration of the problems involved in providing psychological programs for the care of exceptional children. An overview of relevant research and treatment techniques will be combined with practical experience in field settings with exceptional children.

PSYCHOLOGY

403. History and Systems of Psychology. (S) *Fall* (3) Mr. Williams.

From Aristotle to 1940 with special emphasis on the 19th and 20th century. The rise of the major schools of thought: Structuralism, Functionalism, Gestalt psychology, Psychoanalysis and Behaviorism.

***404. Motivation and Emotion.** (S) *Fall*, *Spring* (3) Mr. Johnston.

Theories and facts of motivation and emotion and consideration of their differences. Must have Junior standing or permission of instructor.

405. Perception and the Arts. (S) *Fall* (3) Ms. Null.

An examination of the perception and creation of visual arts and music from the perspective of experimental psychology. Topics will include the use of visual illusions, the representation of color; the perception of melody, pitch, and timbre. (Not offered in 1977-1978).

406. Sexuality. (S) *Fall* (3) Ms. Rosen.

The study of behaviors associated with courtship and reproduction in the animal kingdom. Primary emphasis is on mammalian and primate species. Topics covered include biological and environmental determinants of sexual behavior, the physiology and psychology of the sexual response, and psychosexual differentiation.

***407. Social Psychology and the Law.** (S) *Fall* (3) Mr. Shaver.

This course examines ways in which the theory and research of contemporary social psychology can be brought to bear on various aspects of the criminal justice system. Focusing will be on the issue of discretion, on the part of the police, prosecution, courts, and corrections, the course will identify social psychological processes that can affect law enforcement and the administration of justice.

420. Computer Applications in Psychology. (S) *Spring* (3) Ms. Null.

This course will cover a wide range of ways computers are used in psychological research. Topics covered include data analysis; simulation including models of thought processes and game theory; the computer as experimenter or laboratory controller, and others.

***421. Individual Differences and Testing.** (S) *Spring* (3) Staff.

An introduction to traditional and contemporary theory and methods in the measurement of individual differences.

422. Advanced Statistics. *Spring* (3) Ms. Rosen. Prerequisite: *Psychology 331*.

An advanced course in statistics and experimental design. *Two class hours, two laboratory hours.*

451. Cognition and Thinking. *Spring* (4) Mr. Derks. Prerequisites: *Psychology 331, 340, and 351.*

An examination of the research and theory that helps define and explain the structure and function of the mind.

452. Advanced Physiological Psychology. *Fall* (4) Ms. Rosen. Prerequisites: *Psychology 331, 340, 352.*

A study of the biological bases of behavior from the perspective of research techniques. Selected research areas will be investigated through demonstrations and laboratory projects.

453. Comparative Psychology. *Fall* (4) Mr. Friedman. Prerequisites: *Psychology 331, and 340.*

An examination of basic procedures for studying various animal species with an emphasis on novel sensory systems and the evolution and measurement of intelligence. *Three lecture hours, two laboratory hours.* (Not offered in 1977-1978).

PSYCHOLOGY

454. Sensation and Perception. Fall (4) Mr. Harcum. Prerequisite: Psychology 331, and 340.

This course is concerned with the processes by which a person comes to understand his environment. It considers what changes in the environment stimulate the senses and how the nervous system operates on this change to form projections about the real world. In each perceptual stage the influences of such processes as learning and motivation are examined. Emphasis is placed on analytic methods. Three lecture hours, two laboratory hours. (Not offered in 1977-1978).

461. Behavior Modification. Fall (4) Mr. Ventis. Prerequisites: Psychology 331, 340, and 361.

This course will acquaint students with both techniques and research issues in behavior modification. Laboratory sessions will be devoted to gaining experience with the processes described and to preparing and implementing individual research projects. Three lecture hours, two laboratory hours.

462. Research in Developmental Psychology. Spring (4) Ms. Hartley. Prerequisites: Psychology 331, 340, and 362.

An examination of contemporary issues in developmental research. Research methods will be considered in conjunction with a review of current literature in areas such as early socialization, cognitive development, and behavior problems. Three lecture hours, two laboratory hours.

463. Research in Personality. Fall (4) Mr. McKenna. Prerequisites: Psychology 331, 340, and 363.

This course provides an overview of research methodology as applied to personality. Specific research areas chosen from topics such as traits, anxiety, achievement, locus of control, failure, cognitive style, self-concepts, and personal constructs will be reviewed in detail. The laboratory will provide an opportunity to practice research techniques. Three lecture hours, two laboratory hours.

464. Experimental Social Psychology. Spring (4) Mr. Shaver. Prerequisites: Psychology 331, 340, and 364.

This course considers the methodology of contemporary experimental social psychology, concentrating upon laboratory experimentation, but including selected field techniques. Particular emphasis will be placed on the experimenter-subject interaction, the ethics of research with human subjects, and the relationship between theory and research. Three lecture hours, two laboratory hours.

***470. Topics in Psychology.** Fall, Spring (3, 3) Staff.

Courses concerning special topics not covered in detail in regular course offerings. Course may be repeated; contents will vary but the credit each time is the same, three hours.

***473, 474. Advanced General Psychology.** Fall, Spring (3,3) Mr. Derks, Mr. McKenna.

A review of the general principles of psychology obtained through the teaching of a Laboratory in Introductory Psychology.

***480. Seminar.** Fall, Spring (3, 3) Staff. Mr. Derks, Ms. Hartley, Mr. Shean, Mr. Watson, Mr. Chambers, Mr. Johnston, Mr. McKenna, Mr. Ventis, and Mr. Williams.

Special topics of interest to staff and students will be discussed in seminar fashion. Course may be repeated; contents will vary but the credit each time is the same, three hours.

Fall Semester

Psychology of Humor. Mr. Derks.
Adulthood and Aging. Ms. Hartley.

RELIGION

Literature and Schizophrenia. Mr. Shean.
Humanistic Psychology. Mr. Watson.

Spring Semester

Systems Theory and Psychology. Mr. Chambers.
Learning. Mr. Johnston.
Psychology and Literature. Mr. McKenna.
Psychology of Religion. Mr. Ventis.
Man and Aggression. Mr. Williams.

***490. Directed Reading in Psychology.** *Fall, Spring (TBA)* Ms. Null, Mr. Watson.

Individual supervised readings on special topics. Usually for advanced students. A student must have permission of a faculty supervisor and of the instructor before registering. Course may be repeated, contents and credit each time may vary according to an agreement reached between instructor and student at the time of registration.

***491. Senior Research.** *Fall, Spring (TBA)* Ms. Null, Mr. Watson.

Individually supervised empirical investigations in the various areas of psychology. A student must have permission of a faculty supervisor and of the instructor before registering. Course may be repeated, contents and credit each time may vary according to an agreement reached between instructor and student at the time of registration.

***495-496. Honors.** *Fall, Spring (3, 3)* Mr. Williams.

A student admitted to Honors Study is eligible for an award of Honors in Psychology on graduation.

Honors is independent study comprising (a) supervised reading in the field of the student's major interest, primarily in the original literature; (b) the preparation and presentation by April 15 of an Honors thesis based on the student's own research; and (c) satisfactory completion of a comprehensive examination in the field of the student's major interest.

GRADUATE PROGRAM

The department offers the degree of Master of Arts. For degree requirements, and a full description of graduate courses in Psychology, write to the department chairman.

Religion

PROFESSOR LIVINGSTON, VISITING PROFESSOR PAUCK¹, ASSOCIATE PROFESSORS FINN (Chairman), HOLMES, TIEFEL, and VAN HORN.

AREA AND SEQUENCE GUIDE

The basic college area requirement concerning Area I may be satisfied in Religion by taking any two courses in Religion which are designated (A) or (AS). The sequence requirement may be satisfied by taking any two other courses in Religion designated (AS) or (S). Recommended topical sequences are grouped below by area of study.

REQUIREMENTS FOR CONCENTRATION

A concentration in Religion requires 33 semester credits, at least 27 of which must be taken in the Department of Religion. All concentrators must take one of the following three courses: 311 (History of Religion in South Asia I) or 312 (History of Religion in

¹Walter G. Mason Visiting Professor of Religion, Fall 1977

RELIGION

South Asia II) or 313 (History of Religion in East Asia); one of the following two: 301 (History and Religion of Ancient Israel) or 302 (Christian Origins); one of the following three: 265 (Religious Ethics) or 322 (Medicine, Human Values, and Religion) or 324 (Ecology and Religious Ethics). In addition, 9 credit hours of in-depth work (courses bearing only S designation) in the department are required.

All concentrators should possess some acquaintance with the variety of approaches to the study of religion, with the various theories of the nature and function of religion, and with the beginnings and general history of at least one of the Western and one of the Asian religious traditions, as well as some work in contemporary issues. No specific set of courses must be followed by all concentrators, although a concentration should consist of a series of coherently related courses. A student may wish to divide his work between courses in the Asian and Western religious traditions. Alternately, he may focus his concentration on either the Western or the Asian religions. Areas of special concentration are listed below. Consultation with departmental advisor is expected.

Description of Courses

Introductory Studies in Religion

201. Introduction to Religion: Western Religions (A) Fall (3) Mr. Finn.

An examination of selected major Western religions as various expressions of man's quest for meaning. Among the traditions studied are those of the Ancient Near East, Israel, Early Christianity, and Classical Greece.

202. Introduction to Religion: Asian Religions (A) Spring (3) Mr. Van Horn.

An examination of selected major Asian religions as various expressions of man's quest for meaning. Among the religions studied are Hinduism, Buddhism, Confucianism, Taoism, and Shinto. Not open to those who have taken 311, 312, or 313.

265. Religious Ethics. (AS) Fall (3) Mr. Tiefel.

A study of western religious ethics. The course examines the relationships between religion and morality in philosophical, biblical, Jewish, Roman Catholic and Protestant writings.

Biblical Studies

301. History and Religion of Ancient Israel. (AS) Fall (3) Mr. Tiefel.

A survey of the history and scriptures of the Hebrew people, with emphasis upon the setting, transmission, context, and theological self-understanding of the biblical writings. Not open to Freshmen.

302. Christian Origins. (AS) Spring (3) Mr. Finn.

A study of the literature of the New Testament and its cultural context in the light of contemporary biblical scholarships. Includes an analysis of the Pauline letters, the gospels, and the other canonical works of developing Christianity. Not open to Freshmen.

304. The Hebrew Prophets. (S) Spring (3) Mr. Tiefel.

A study of the function and message of the Hebrew prophets within their political and social setting. Not open to Freshmen.

Studies in Asian Religion

311. Religion in South Asia: Formative to Epic Periods. (AS) Fall (3) Mr. Van Horn.

An examination of the history of the religions in South Asia from the beginnings until the end of the Hindu Epic period (c2000 B.C. to A.D. 200). Covered will be the Indus Valley Civilization, Vedism, Brahmanism, Jainism, Buddhism, and Epic Hinduism in their cultural and historical contexts.

RELIGION

312. Religion in South Asia: Classical to Modern Periods. (AS) Spring (3) Mr. Van Horn.

An examination of the history of the religions in South Asia from the classical period to modern times (A.D. 200 to the present). Covered will be the classical and medieval religious movements and thinkers in Hinduism and Buddhism including Tantrism, the Islamic period, the British influence and revival and reforms of the 19th and 20th centuries in their historical and cultural contexts.

313. History of Religion in East Asia. (AS) Fall (3) Mr. Van Horn.

Introduction to the religious systems of China and Japan, including the literatures, histories, thought patterns, and practices of the major schools of Confucianism, Taoism, Buddhism, and Shintoism.

315. Buddhism in South Asia. (S) Fall (3) Mr. Van Horn.

An intensive study of the Buddhist origins and the development in India and the history of the South Asian schools. The classical literature, practices, and beliefs of Buddhism in South Asia, with emphasis on the Theravada school of present Ceylon, Burma, Thailand, etc.

316. Buddhism in East Asia. (S) Spring (3) Mr. Van Horn.

A study of the assimilation of Buddhism in China and Japan. Emphasis upon the literatures, practices, and philosophical statements of Mahayana Buddhism in its various Chinese and Japanese forms.

318. Modern Hinduism. (S) Spring (3) Mr. Van Horn.

A brief survey of the essentials of classical Hindu traditions, followed by an extensive examination of the interactions between these traditions and "Westernization" or "Modernization." Emphasis will be placed upon Ram Mohan Roy, Dayananda, Ramakrishna, Tagore, Gandhi, Radhakrishnan, and "Universal Hinduism."

Studies in Religious Ethics

322. Medicine, Human Values, and Religion. (AS) Spring (3) Mr. Tiefel.

The study of moral and religious problems arising in such biomedical issues as abortion, human experimentation, euthanasia, genetic engineering, organ transplants, and behavior control.

324. Ecology and Religious Ethics. (AS) Spring (3) Mr. Tiefel.

A study of the moral and religious aspects of such problems in human ecology as overpopulation, pollution, and resource depletion. The course relates such ecological issues to the Western religious understanding of the nature of man and of human obligations to other persons, to nations, to future generations, to animals, and to the earth. (Not offered in 1977-78).

328. Topics in Contemporary Religion: Death and Dying. (S) Spring (3) Mr. Tiefel.

An examination of selected contemporary issues in religion. The topic for Spring 1978 is death and dying. The course considers philosophical, medical, legal, and cultural perspectives against a background of biblical, Jewish, and Christian beliefs. It includes such topics as the limitations and responsibilities inherent in human mortality, the means available to deal with death, and the hope for an after-life.

Studies in Western Religious History and Thought

330. Significant Books in Western Religion. (AS) Spring (3) Mr. Holmes.

A study of selected classics in the history of western religion such as Augustine's *Confessions*, Bede's *Ecclesiastical History*, Thomas á Kempis's *Imitation of Christ*, Bunyan's *Pilgrim's Progress*, Pascal's *Pensées*, Newman's *Apologia*, and Paine's *The Age*

RELIGION

of Reason. Included also are other representative works such as Stowe's *Uncle Tom's Cabin*, Shelton's *In His Steps* and Malcolm X's *Autobiography*.

333. Christianity: Patristic and Medieval Period. (S) *Fall* (3) Mr. Finn.

A study of Christian thought and institutions from the second through the thirteenth centuries with emphasis on the representative figures, movements, and literature in both Eastern and Western Christianity.

334. Christianity: The Early Modern Period. (S) *Spring* (3) Mr. Holmes.

A study of the personalities, movements, institutional, and theological developments in the Christian churches of Europe and Great Britain from the eve of the Reformation through the eighteenth century. Includes late medieval life and thought, Conciliarism, the life and work of the Protestant and Roman Catholic continental Reformers, the English Reformation, Puritanism, Pietism, the poet-Restoration Church of England, Methodism, and the Evangelical Revival.

335. Modern Religious Thought: The Enlightenment to Existentialism. (S) *Fall* (3) Mr. Livingston.

A study of the major developments in Western religious thought from the eighteenth century to the Second World War, with attention given to such thinkers as Hume, Kant, Rousseau, Hegel, Newman, and Kierkegaard and to the religious significance of such movements as Rationalism, Romanticism, Idealism, Darwinism and Existentialism.

336. Contemporary Religious Thought: Theistic Belief. (S) *Spring* (3) Mr. Livingston.

An examination of religious thought since the Second World War through the study of representative writers and themes. (Not offered in 1977-78).

339. The Protestant Reformation in its Cultural Environment. (S) *Fall* (3) Mr. Pauck.

A study of the Reformation in its political, economic, educational, and religious context, including its internal dynamics, its relationship to renaissance humanism, and its response to Roman Catholicism. Attention will also be paid to the roots of the Reformation and to the Counter-Reformation. (same as History 342)

Studies in American Religion

345. History of Religion in America: Age of Discovery to 1840. (S) *Fall* (3) Mr. Holmes.

A study of religion in the United States from the age of discovery to 1840 with attention not only to the development and beliefs of Christian churches and sects but also to the interaction between religion and American social, intellectual, and cultural history.

346. History of Religion in America: 1840 to the Present. (S) *Spring* (3) Mr. Holmes.

A study of religion in the United States from 1840 to the present with attention not only to the development and beliefs of Christian churches and sects and to Judaism but also to the interaction between religion and American social, intellectual, and cultural history.

347. American Sects and Cults. (AS) *Fall* (3) Mr. Holmes.

An examination of the historical development and religious teachings of minority groups differing from the mainstream of American religion. The course will include both well-established and contemporary groups such as Mormonism, Old Order Amish, Pentecostals, American sects of Eastern origin, Spiritualism and black metropolitan cults. Open to Freshmen with permission of instructor.

349. Religion in the American South. (S) *Fall* (3) Mr. Holmes.

A study of the development and cultural impact of religion in the American South, including colonial religion, the Great Awakenings, the rise of Pietism, the churches and slavery, Black Christianity, the controversies over science and the bible, and the civil-rights movement.

SOCIOLOGY

Independent Studies

481, 482. Independent Study in Religion. (S) *Fall and Spring* (3, 3) Staff.

A program of extensive reading, writing, and discussion in a special area of religion for the advanced student. Students accepted for either course will arrange their programs of study with appropriate members of the department. Permission of the chairman required.

HONORS PROGRAM

495, 496. *Fall and Spring* (3, 3) Staff.

Students admitted to Senior Honors in Religion will be responsible for (a) reading and research supervised by a faculty member designated by the chairman, (b) presentation of an honors essay acceptable to the examining committee and submitted by April 15 of the student's senior year, and (c) satisfactory performance in an oral examination based on the honors essay and related background. Consult the chairman for eligibility, admission, and continuance requirements.

THE WALTER G. MASON VISITING PROFESSORSHIP

Inaugurated this academic year, the visiting professorship is supported by funds from the Eminent Scholars Program of the Commonwealth of Virginia and through a fund established in 1967 by Mr. Walter G. Mason of Lynchburg, Virginia, past member and rector of the Board of Visitors of the College and present member of the President's Council. Its purpose is to encourage the scholarly study of religion as a field of absorbing contemporary interest and importance by bringing distinguished visiting scholars to the department.

Sociology

ASSOCIATE PROFESSOR BECKHOUSE (Chairman). PROFESSORS EDMONDS, KERNODLE, RHYNE, and VANFOSSEN. ASSOCIATE PROFESSORS FAIA, GUENTHER, ITO, KERNER, KREPS, LIGUORI, and THEMO. ASSISTANT PROFESSOR CHRIST.

THE SOCIOLOGY PROGRAM

The Department of Sociology does not have or desire a single integrated purpose or educational philosophy. Various members emphasize the following purposes to different degrees: (1) to help students understand the nature of man in society, with particular emphasis on the issues and complexities of modern society; (2) to enhance student's knowledges and capacities for critical and original thought by involving them in the accumulation of scientific information and the development of research and analytic skills; (3) to provide opportunity for students to have a personal educational experience which enhances their own lives and encourages responsible concern for the quality of society; (4) to contribute to the field of Sociology through research, publication, and involvement in professional associations and activities; (5) to recruit promising students into the profession of Sociology; and (6) to serve the University and society in general, by making available the professional expertise of sociologists.

The Department believes the above purposes to be compatible with one another, and that Sociology must reflect the diversity found in its principle object of study—namely, modern society.

Concentration in Sociology requires a minimum of thirty semester credits. Students must take 201, 202, 303, 307, 390, and, after completing 390, at least one course numbered 400 or above (480, 481 do not satisfy this requirement).

At least twenty-four of the thirty semester credits required for concentration must be

SOCIOLOGY

earned in courses numbered 300 and above. Many courses offered by the College's program in the foreign universities are accepted toward a Sociology concentration, but not as substitutes for the required courses. The minimum credit hour requirement for a concentration is intended to encourage the student to pursue a wider range of electives in order to develop a broad perspective. It also allows the student to develop a special field of interest in an interdisciplinary manner.

Offices and classrooms on the second floor of Morton Hall include a statistical laboratory with 24 automatic calculators. Access to facilities of the Computer Center include an I.B.M. 360, Model 50, ancillary equipment, punch cards and program library. Eastern State Hospital provides opportunity for research and field work in the Sociology of Mental Illness. Virginia Institute of Marine Science offers research opportunities in maritime sociology.

Within the Department a wide range and variety of courses are offered covering most of the substantive fields of the discipline as well as its methodology. Whenever possible, the Department attempts to introduce courses affording opportunities for field work application and direct experience. In response to varying needs, interests, and expertise of individual students and staff members, the Department provides means for students to pursue independent research and studies through 490 (Independent Research), 480, 481 (Readings in Sociology), and 495-496 (Honors). Also, the format of 440 (Special Problems in Sociology), allows staff members to present seminar courses, on a one semester basis, which gives them an opportunity to expand a new or specialized interest or research topic. The 440 format allows flexibility, variety, and a means to respond quickly to particular interests expressed by students. It also represents one of the many results of the effective Student-Faculty Liaison Committee within the Department.

DESCRIPTION OF COURSES

150. Freshman Seminar. *Fall or Spring* (3) Staff.

201-202. Introduction to Sociology. (A) *Fall and Spring* (3) Staff.

An introduction to the study of human society with emphasis on the basic principles of sociology. Principal concepts developed include society, culture, status and role, socialization and personality, stratification, social organization and institutions, and social change. This course, in providing an integrated set of general principles, is the appropriate introduction to further study in sociology. Sociology 201 is a prerequisite for Sociology 202.

220. Social Problems. (S) *Fall and Spring* (3) Staff.

A survey of social problems such as poverty, urban conditions, race relations, delinquency and crime, and other recurring problems of major concern to contemporary society. The analytic perspective is sociological, stressing concepts drawn from substantive sub-fields of the discipline.

303. Sociological Theory. (S) *Fall* (3) Mr. Kerner.

Examination of the historical foundations of sociological theory and the establishment of a basis for rational, objective analysis of recent social phenomena. The contributions of 19th century theorists are traced to provide a framework for the study of contemporary concepts in the field.

307. Introduction to Social Statistics. *Fall* (3) Mr. Faia.

The applications and limitations of statistics are presented as means of providing tools whereby statistical methods may be recognized, interpreted, and applied in sociological research. Included are considerations of averages, measures of dispersion and variance, simple linear correlation and sampling theory. Emphasis on the logic of procedures, not on mathematical derivations. *Three class hours, two laboratory hours.*

313. Social Stratification (S) *Fall* (3) Ms. Themo.

SOCIOLOGY

Examination of the principal structural units of society. Central focus is on the concepts of differentiation, hierarchy, class, caste, and economic, prestige, and power orders. Comparative analysis, historical and cross-cultural, is followed by consideration of class structure in the United States.

319. Population Problems. (S) Spring (3) Mr. Faia.

A consideration of the manner in which populations grow and decline and the effects of such change on society. Emphasis is on theories of population growth, distribution, births, deaths, internal and international migration, bio-social and sociological composition. Included are discussions of the sources of data and techniques and methods of analysis, as well as contemporary population problems.

322. Criminology. (S) Fall (3) Mr. Guenther.

An analysis of trends in criminal behavior; emphasis is on theory and research in causation and treatment. Attention is given to criminal careers, to police and correctional systems as control agencies, and to criminal law as an instrument of moral condemnation, retribution and deterrence.

326. Racial and Cultural Minorities. (S) Spring (3) Mr. Liguori.

Distinctions of race and ethnicity in American society and their impact on intergroup relationships and public policy. Attention is given to the nature of racialist ideology, to prejudice and discrimination, and to an analysis of "the culture of poverty". Considered also are less frequently examined and non-problem minority groups.

328. Black-White Relationships in American Society. (S) Fall (3) Mr. Ito.

The nature of black-white relationships in American society is analyzed in terms of institutional, structural, cultural and personality factors. These relationships are seen within the interpretative context of black adaptation to their minority status from the slavery period to the present.

329. Changing Sex Roles in Contemporary Society. (S) Fall (3) Ms. Themo. Prerequisite: Sociology 201 or Psychology 201.

Examination of contemporary changes in sex roles and the consequences of being female and being male in terms of roles, rewards, costs, and identities. Analysis of the biological vs. the cultural determinants of sex differences; the social, economic, and political functions of role differentiation; and the reciprocity of sex roles in terms of exchange theory and power bargaining, especially in the context of marriage. Cross-cultural comparison of changing sex roles in selected revolutionary countries such as China, Russia, France, and Cuba. (Not offered 1977-78).

330. Sociology of Mental Illness. (S) (Not offered 1977-78) (3) Mr. Kernodle. Prerequisite: Sociology 201 or consent of instructor. Limited enrollment.

A seminar on the sociological aspects of mental illness and mental health. The social and cultural sources of mental disorders, definitions, types, distribution within the social structure and sociological factors in the treatment of mental illness will be scrutinized. Consideration of the mental hospital as a social system.

331. The Community and Social Psychiatry. (S) (Not offered 1977-78) (3) Mr. Kernodle. Prerequisite: Sociology 201 and Sociology 330 or consent of the instructor.

A study of the structure and relationships among various social organizations and professions in the community which are involved in the development and delivery of psychiatric services. Community psychiatry as a social movement is explored and related to changing social values and definitions of illness and health.

332. Marriage and the Family. (S) Fall (3) Mr. Kernodle.

Analysis of the social relationships among people in courtship, marriage and family situations. Interrelations of family institutions and other parts of social structures.

SOCIOLOGY

Intensive study of American family structure and relevant examples drawn from other cultures.

333. Political Sociology (S) *Fall* (3) Mr. Christ.

An introductory examination of the social bases of political behavior. Topics of consideration will include the formation of ideologies and the organization of ideological movements, particularly as they are influenced by socio-economic status, and the impacts on voting behavior and political participation of such variables as age, sex, class, ethnicity, occupation, and region.

334. Sociology of Religion. (S) *Spring* (3) Ms. Themo.

Conceptions of the supernatural in examination of religious beliefs and practices; development of religious groups and institutions; relation of religion to social structure and social change.

335. Sociology of Education. (S) *Spring* (3) Mr. Ito.

Public education as social institution, as bureaucratic system, and political arena. Current issues such as equality of educational opportunity, teacher militancy, community control and school reform are covered. Selected topics in higher education are considered.

346. Maritime Sociology. (S) *Fall* (3) Mr. Liguori.

Description and analysis of the life styles of people oriented primarily to maritime occupations and environments. Attention is directed to inshore vs. distant-water shipboard life styles, the study of specific maritime work organizations distinguished on the basis of technology and research on 'isolated' fishing communities. The reading includes relevant fiction as well as the sociological literature in the field.

349. Human Geography. (S) *Fall* (3) Mr. Rhyne.

A study of the adjustment of human societies to their physical environment. Emphasis is on the spatial distribution of human population, cultural forms, and social types. Examination of social and cultural bases of environmental pollution and its control.

350. Interpersonal Behavior in Small Groups. (S) *Spring*. (3) Mr. Beckhouse.
Prerequisite: Sociology 201 or consent of instructor.

Introduction to the theory and research of small group behavior. The structural properties of small groups such as size, leadership, communication, and status hierarchies will be examined. Such group properties as status consistency, interpersonal power, coalition formation, conformity, deviance, and social control will also be considered. Various theoretical perspectives for analyzing interpersonal behavior will be presented, and students will be given an opportunity to engage in group interaction through semester projects.

352. Complex Organizations and Contemporary Society. (S) *Spring* (3) Mr. Kreps, Mr. Kerner.

The course presents both an historical and contemporary approach to the study of organizational behavior with special emphasis given to the impact of organizations on their environments. Recent research concerned with the problems of a variety of public and private organizations such as law enforcement, planning and other community agencies, voluntary groups and associations, and business organizations will be analyzed and discussed.

360. Sociology of Sports and Leisure. (S) (*Not offered 1977-78*) (3) Mr. Kernodle.

This course provides a study of the scope of sports and leisure involvements which range from two-person or small group relationships to large and complex social patterns. Themes of sports and leisure explored are cross-cultural varieties, normative controls, social differentiation, and the degree of formality and informality in the organizational aspects of these social activities.

SOCIOLOGY

390. Social Research. Spring (3) Staff. Prerequisites: *Sociology 201-202 and 307.*

Examination of the major issues and strategies involved in conducting sociological inquiry. Special attention is given to such topics as causal inference, sampling frames, structured and unstructured observation, data analysis, and research design and implementation.

404. History of Social Thought. (S) Spring (3) Mr. Rhyne.

A survey of the major strands in social thought in the West and the influence of these on the founding and development of sociology as a separate discipline.

406. Socialization and Society. (S) (Not offered 1977-78) (3) Mr. Beckhouse.

Analysis of theoretical and empirical issues relevant to socialization. Emphasis is upon the generic process by which individuals become members of society, with special consideration on the impact of socio-economic class, race, and family structure on socialization. Specific examination of socialization beyond childhood is also offered.

407. Sociology of Aging. (S) Fall (3) Mr. Kernodle.

Examination of the social, cultural, and social-psychological aspects of human aging. Special emphasis is given to the middle and later years of life. Concepts and theories of aging and their consequences for older persons are analyzed. Lecture three hours; three credits. Prerequisite: *Sociology 201, Psychology 201, Anthropology 202, or consent of instructor.*

408. Intermediate Social Statistics. (Not offered 1977-78) (3) Mr. Ito. Prerequisite: *Soc. 307 or equivalent. Sociology 390 recommended.*

A brief review of the logic underlying inductive statistics and tests of significance of single variables followed by tests of significance involving two or more variables. Parametric and non-parametric measures of relationship between two or more variables will also be considered.

410. Deviant Behavior. (S) Spring (3) Mr. Guenther.

Analysis of behavior which violates institutionalized expectations, yet is not necessarily "pathological" or illegal; college cheating, homosexuality, nudism, drug and alcohol abuse, and suicide, for example. Focus is on the internalization of norms and values, sanctioning and stigmatization, and the development of deviant careers.

411. Future Society. (S) Fall (3) Mr. Vanfossen.

An analysis of the major strains and changes in post-industrial society and the possible alternative forms human society might take. Particular attention is given to the cultural revolution; energy, ecology and the economy; alienation; changing values and lifestyles; and personal and social freedom. The basic concern is how both social structure and socialization might be organized to produce a better society.

413. Urban Sociology. (S) Fall (3) Mr. Kreps.

The emergence and structure of the city in historical and cross cultural perspective, with special attention to the phenomena of urbanization and urbanism in the United States. Consideration of urban structure from both ecological and social perspectives; analysis of change in urban structure; selected problems associated with urban growth and planning.

415. Ideology in the Social Sciences. (S) Spring (3) Mr. Edmonds.

A study of how values and beliefs of social scientists affect the pursuit of knowledge with emphasis upon the generation of theories of, and engineering programs for, economic, educational, occupational, and racial equality.

416. Social Movements. (S) Spring (3) Mr. Rhyne.

A study of the social and cultural characteristics of contemporary social movements

SOCIOLOGY

such as liberalism, democracy, socialism, communism, fascism. A critical evaluation is made of the philosophies, social foundations, and organizations of important movements. Emphasis on the interplay of these three factors.

422. The Sociology of Knowledge. (S) Spring (3) Mr. Christ.

The course consists of an extensive inquiry into the literature of the sociology of knowledge—a tradition emphasizing the relationship between mental productions and the social circumstances under which they emerge. Emphasis upon the relationships between social structure and general cognitive systems, political ideologies, social norms, and scientific ideas.

433. The Structure of Power. (S) Fall (3) Mr. Rhyne.

The organization of power and authority within the social order. Comparison drawn between different power structures in terms of differences in the social order. An investigation of the writings of some of the major theorists (some combination from Marx, Mosca, Lenin, Pareto, Michels, or Sorel and contemporary authors) on social and political power is undertaken.

438. Social Psychology of Human Groups. (S) Fall (3) Mr. Edmonds.

Examination of the social sources of individual experience and behavior with particular emphasis upon relations within and between human groups. Among the topics considered are human learning, human thought and language, personality, development, socialization, social persuasion, crowd behavior, fads, fashions, and social movements.

#440. Special Problems in Sociology. Fall or Spring (3) Staff.

Selected topics in sociology. The topic to be considered will be announced prior to the beginning of the semester. Instructors may require prior approval for registration.

442. The Sociology of Developing Countries. (S)(Not offered 1977-78) (3) Ms. Themo.

Examination of processes inherent in cultural, political, and economic development within both emergent and established “under-developed” nations. Focus is on institutional structures and attitude systems supporting modernization of traditional social orders. Main substantive materials are drawn from contemporary Latin America.

480-481. Readings in Sociology. Fall and Spring (1-3) Staff.

Independent readings directed toward conceptual topics and substantive areas in Sociology. The student will read materials in his own area of interest in consultation with an appropriate staff member. Readings will not duplicate areas covered in courses offered in the curriculum. Prior to registration, students must obtain written permission from both the department chairman and the instructor who will direct the readings. The number of credit hours will be arranged prior to registration and cannot be changed after the “add-drop” period. (480-481 will not satisfy the 400-level course requirement for concentrators.)

490. Independent Research. Fall and Spring. (3) Staff. Prerequisite: Sociology 390.

This course is designed to permit the Sociology concentrator to engage in independent research after completing Sociology 390 (Social Research). Working closely with a staff member as an advisor, each student will be expected to prepare a paper in the form of a senior thesis.

HONORS STUDY

495-496. Honors. Fall and Spring. (3, 3) Staff.

Sociology Honors candidates enroll for both semesters of their senior year. Requirements include: oral defense of ‘Honors Proposal’ at the end of the first semester; preparation, under the supervision of a thesis advisor, and presentation by April 15 of a

THEATRE AND SPEECH

completed honors essay or project; and satisfactory performance in a comprehensive oral examination which focuses on the honors thesis or project.

GRADUATE PROGRAM

The department offers the degree of Master of Arts. For degree requirements, and a full description of graduate courses in sociology, write to the department chairman for a Graduate Catalog.

Theatre and Speech

ASSOCIATE PROFESSOR MICKEN (Chairman). PROFESSOR CATRON. ASSOCIATE PROFESSORS BLEDSOE and BROWN. ASSISTANT PROFESSOR McCONACHIE. INSTRUCTOR McHUGH.

By virtue of his decision to become a Theatre Concentrator the student accepts the requirements demanded by his art—self-discipline, cooperation, dedication, desire for constant improvement toward excellence, curiosity—and the responsibilities to his art which co-exist with those already important ones demanded of him as a college student. The concentrator realizes that he must become acquainted with all facets of theatrical practice and proficient in many. As a Theatre Concentrator the student has special obligations to his theatrical organization—The William and Mary Theatre—the stage counterpoint of his academic career, carefully designed to give him full opportunities to develop his craft and art.

After his graduation he will want to be able to lead others; therefore, he should now seek opportunities to train himself as a leader, under the helpful wing of The Theatre and its Staff. Many opportunities exist for the student's growth in leadership capabilities: in addition to the four major productions produced by The William and Mary Theatre, a student may also participate in Directors' Workshop, plays directed by students in the class in Direction; and in Premiere Theatre, plays written, produced, directed and acted by students.

His future life in the theatre is greatly dependent upon his own utilization now of the opportunities provided by the activities in The Department of Theatre and Speech. His training at William and Mary provides him excellent preparation to work in theatre, to teach, or to continue studies on a graduate level.

REQUIREMENTS FOR CONCENTRATORS IN THEATRE

A concentration in Theatre requires 30 credits in theatre courses, 27 hours of which must be according to certain areas which insure a balanced and representative program. Students considering a Theatre concentration are advised to take Theatre 204 and/or 205 early in their academic careers, preferably during the Freshman year.

A specific Theatre program must contain the following minimal concentration requirements:

- I. Two introductory survey courses (6 credit hours) to survey the art and craft of Theatre (Theatre 204 and 205);
- II. Two courses in Theatre Arts (6 credit hours) chosen from the following selection: Theatre 301 or 302, 317 or 318, 407 or 408, 320;
- III. Two courses in Technical Theatre (6 credit hours) chosen from the following selection: Theatre 305, 309, 313, 321;
- IV. Three courses in Dramatic Literature courses (9 credits) chosen from the following selection: Theatre 315, 316, 403, 404, 410.

THEATRE AND SPEECH

THEATRE

204. Introduction to Theatre Arts. (A) *Fall or Spring* (3) Mr. Bledsoe, Mr. McConachie.

A survey of the arts of the theatre, plus study of dramatic literature of major periods of theatrical history. Theories and techniques of playwriting, acting and directing will be studied, then put into actual practice during laboratory sessions. *Two class hours, two laboratory hours.*

205. Introduction to Technical Production. (A) *Fall or Spring* (3) Staff.

Study and practice of technical components of the theatre; costuming, lighting, sound, properties, stage rigging and scene design, construction, and painting. *Two class hours, two laboratory hours.*

***206. Makeup.** *Spring* (2) Mr. Bledsoe.

Study and practice of makeup in relation to light, shade and color; character analysis study, showing the effects of heredity, temperament, environment, health and age. Students in this course assist in William and Mary Theatre productions. *Six studio hours.* (Not offered in 1977-78).

***301, 302. Acting.** *Fall and Spring* (3, 3) Mr. McConachie.

Critical analysis and appreciation of acting developed by lectures, reading and discussion, and presentation of individual and group scenes.

303. Scene Painting. *Fall* (2) Mr. Bledsoe.

Study of the various techniques for scene painting. (Alternate years; not offered in 1978-79).

305, 306. Stagecraft. *Fall and Spring* (3, 3) Staff.

Study and practice in technical problems; working drawings, construction, scene painting, rigging, and handling of scenery, properties, backstage organization, and sound effects. Students in this course act as technicians for William and Mary Theatre productions. *Workshop six hours.*

309-310. Design for the Theatre. *Fall and Spring* (3, 3) Mr. Bledsoe.

Basic analysis of the visual elements of theatrical production. Lectures and demonstrations on significant historical periods. Emphasis is placed on water-color sketching, and drafting. Students act as technicians for William and Mary Theatre productions. *Studio six hours.* (Not offered in 1977-78)

312. History and Appreciation of the Motion Picture. *Fall and Spring* (2) Mrs. Brown.

Survey of the historical development of the film in Europe and American, and of organization, management, and mechanical process in production. Historic and current films are shown. *Two class hours; two laboratory hours.*

313. Introduction to Stage Lighting. *Fall* (3) Staff.

Methods and materials of stage lighting, with emphasis on the study of the functions and qualities of light, instruments, control equipment, and procedure. Students will assist with William and Mary Theatre productions. *Two class hours; two laboratory hours.*

314. Stage Lighting Design. *Spring* (3) Staff. *Prerequisite: Theatre 313 or consent of instructor.*

Theory and technique of stage lighting design, with emphasis on artistic considerations and its value to the director as an interpretative tool. Students will assist with William and Mary Theatre productions. *Two class hours; two laboratory hours.* (Not offered 1977-78)

THEATRE AND SPEECH

315. History of the Classical and Medieval Theatre. (S) *Fall* (3) Mr. McConachie.

Study of the forms of the drama, development of the theatre and techniques of the stage of the Greek, Roman and Medieval Ages.

316. History of the Renaissance, Eighteenth and Nineteenth Century Theatre. (S) *Spring* (3) Mr. McConachie.

Study of the forms of the drama, development of the theatre and techniques of the stage in the Renaissance, Eighteenth and Nineteenth centuries.

317-318. Playwriting. (S) *Fall and Spring* (3, 3) Mr. Catron.

For the student with interest and ability in creative writing, this course serves as an introduction to stagewriting. Students write a number of plays which are discussed informally in class. Discussions, exercises, and readings help the student find a dramaturgical form to express his ideas. Worthy scripts often receive a Lab Theatre production. (New students may enter the course second semester. Students are urged, but not required, to have had Theatre 204 before enrolling in this course.)

319, 320. Theatre Administration. *Fall and Spring* (3, 3) Staff.

The principles of management applied to the fields of theatre operations, production and performance, with emphasis given to promotion, box-office procedures and house management. (Not offered 1977-78)

321-322. Costume Design for the Theatre. *Fall and Spring* (3, 3) Staff.

Lectures of historic period costume. Practice in sketching, construction, form, color and detail for stage costumes. Students serve as costume assistants for William and Mary productions.

***Theatre 330. American Music Theatre.** (S) *Spring* (3) Staff.

A study of American operetta and musical comedy from the colonial period to the present. Representative works from various periods will be studied with respect to their musical and dramatic styles. Students will be required to prepare excerpts for class performance and analysis. Same as Music 318. (Not offered 1977-78)

403. Seminar in Contemporary Drama. (S) *Fall* (3) Mr. Bledsoe.

Analysis of late nineteenth and twentieth century drama with special emphasis on forms and styles of the "modernism" movement. *Lectures, discussion and research.*

404. Seminar in the Modern Theatre since 1950. (S) *Spring* (3) Mr. Bledsoe.

A study of the latest trends and movements in Theatre. The course places focus upon new concepts of theatre, new styles of theatrical organizations and new playwrights.

***407-408. Direction.** (S) *Fall and Spring* (3, 3) Mr. Catron.

Study and practice in the principles of choosing the play, casting, rehearsals, and performance. Special emphasis on direction of one-act plays. *Two class hours; six laboratory hours.*

410. History of the American Theatre. (S) *Spring* (3) Mr. Catron.

The history of the theatre in America from its beginnings in Williamsburg up to more recent times. Readings of plays and texts are designed to present the more significant developments in American theatre history. (Not offered in 1977-78)

***411. Independent Studies in Theatre.** *Fall or Spring* Staff.

Independent study on a special problem for the advanced student, arranged on an individual basis with credit according to work done.

417-418. Advanced Playwriting. *Fall and Spring* (3, 3) Mr. Catron.

Advanced study of form and content in drama, accomplished by readings of dramatic

SCHOOL OF BUSINESS ADMINISTRATION

theories as well as of original playscripts, plus the writings of plays. Prerequisite: Theatre 317-318, at least one additional Theatre course, and permission of instructor.

SPEECH

201. Public Speaking. Fall and Spring (3) Mr. Micken, Ms. McHugh.

Understanding and application of the principles of public speaking. Analysis of speeches based on organization, content, and delivery.

203. Voice and Diction. Fall and Spring (3) Mrs. Brown.

Study of processes of oral speech, including development of speech in young children, physics of sound, physiological, psychological and social bases of speech and phonetics. Training in voice production, articulation, pronunciation and quality.

303. Oral Interpretation. Fall (3) Mrs. Brown.

Study of basic principles in techniques of oral interpretation. Use of body, voice, analysis of materials, reading and evaluations of prose. Three class hours, one hour practicum.

304. Advanced Oral Interpretation. Spring (3) Mrs. Brown. Prerequisite: Speech 303 or consent of the instructor.

Study of and training in techniques or oral interpretation of poetry. Three class hours, one hour practicum.

308. Speech Composition. Fall and Spring (3) Staff.

Study of the special techniques of speech construction as applied to advanced forms of public address, emphasizing structure, arrangement, and style. (Not offered 1977-78)

309. Argumentation and Debate. Fall (3) Ms. McHugh.

Training in the techniques and practices of argumentative speaking, study and analysis of debate propositions, preparation of the brief, research and selection of evidence, and practice in rebuttal and refutation. Lectures and class debating.

310. Principles of Group Discussion. Spring (3) Mr. Micken.

Study of logical and psychological foundations of discussion as a method of dealing with public questions, considering problems of adjustment, communication and collaborative action in small groups. Emphasis on principles, types and methods of discussion. Lectures and practice participation. (Alternates with Speech 308.)

School of Business Administration

PROFESSORS QUITMEYER (Dean), PARK, PEARSON, QUINN, SANCETTA (Associate Dean for Undergraduate Studies), SMITH, STANLEY, TRAYWICK (Chancellor Professor and Director of the Bureau of Business Research), and J. WILLIAMS (Zollinger Professor). ASSOCIATE PROFESSORS COLE, DAFASHY, ELGERS, LIDDELL, MADDOCKS, MESSMER, O'CONNELL (Associate Dean for Graduate Studies), TARLETON and WARREN, ASSISTANT PROFESSORS BLOOM, DOWNS, EMDEN, FLOOD, HALTINER, HAWTHORNE, HOYLE, MALLUE, SOLOMON, and S. WILLIAMS.

The School of Business Administration offers both an undergraduate program and a graduate program in Business Administration.

The undergraduate degree of Bachelor of Business Administration (B.B.A.), which is accredited by the American Assembly of Collegiate Schools of Business (AACSB), carries a choice among three subprograms, two in Accounting (one with a Certified Public Accountant (CPA) orientation and one without) and one in Management.

SCHOOL OF BUSINESS ADMINISTRATION

These three subprograms are not concentrations. Concentrations are taken only in the undergraduate programs of the Faculty of Arts and Sciences leading to the A.B. and B.S. degrees.

The graduate program, which is also accredited by AACSB, leads to the degree of Master of Business Administration (M.B.A.).

The Bureau of Business Research of the School renders a service to the Virginia business community with its monthly publication, the Virginia Business Index Report, which reflects current business and economic activity in the Commonwealth. The Bureau also publishes monthly the Williamsburg Business Index Report. In addition, the Bureau from time to time publishes special research studies.

Further service to the business community is provided by the School through sponsorship of business conferences and projects.

Established in 1970, the School of Business Administration Sponsors, Inc., a private group with a board of directors of twenty-one executives, lends advice and support to the School.

CURRICULUM REQUIREMENTS

Bachelor of Business Administration Degree

Prior to the student's junior year, only at which time, or later, admission to the School and its B.B.A. degree program may occur, the student must follow and complete the area requirements in Arts and Sciences consisting of a minimum of two semester courses in each of the three Arts and Sciences areas and two additional semester courses outside of Area II so that at least four semester courses outside of Area II form a logical sequence of introductory and advanced courses or a logical combination of courses on an interdisciplinary topic. Also, the student must complete whatever requirements in Arts and Sciences prevail in regard to English, Foreign Language, and Physical Education. However, the student should take, during the sophomore year, Business 201-202 (Principals of Accounting). No other Business Administration course may be taken before the student's junior year.

Prerequisites to admission to the School are six semester credits in mathematics and six semester credits in economics which also satisfy the area requirements in these subjects.

Before being graduated with the B.B.A. degree, the student must have completed a minimum of sixty semester credits in Arts and Sciences academic subjects.

Application for admission to the School of Business Administration's B.B.A. degree program normally is filed by the student during the second semester of the sophomore year through the Office of the Dean of Students. Such application is then acted upon by the School's Undergraduate Committee on Admissions, whereupon the student is notified directly, with the Office of the Dean of Students apprised of admission actions taken. A student who has achieved junior standing, has completed all Arts and Sciences proficiency and area requirements, and has met the School of Business Administration's prerequisite requirements, as above, will be fully admitted to the undergraduate program. A student who has deficiencies in any of the above, but whose class standing is such that a Business subprogram should be selected, will be considered for admission on provisional status. Provisionally admitted students will be required to give priority to completion of any deficiencies.

The following requirements for completion of the B.B.A. degree, subject to the aforementioned curriculum requirements, will hold for each of the School's three subprograms. A 2.0 quality point average is required, counting all courses for which quality point grades are given, and a 2.0 quality point average in all Business Administration courses taken in which quality point grades are given.

Upon admission to the School of Business Administration all candidates for the B.B.A. degree shall come under the jurisdiction of the School's administration, including its Undergraduate Committee on Academic Status and Undergraduate Committee on Degrees, in all matters appropriately pertaining thereto.

In addition to the general requirement of a minimum of sixty semester credits in Arts

SCHOOL OF BUSINESS ADMINISTRATION

and Sciences academic subjects, the Business Administration course requirements common to all three subprograms are as follows:

Subject	Semester Credits
Business 201-202 (Principles of Accounting)	6
Business 311 (Principles of Marketing)	3
Business 327 (Principles of Management)	3
Business 323 (Financial Management)	3
Business 330 (Production Management)	3
Business 331 (Business Statistics)	3
Business 341 (Business Law I)	3
Business 416 (Business Policy)	3
Total	27

The Business 331-318 sequence must be completed in the junior year. In addition, the following courses should be completed in either the fall of spring semester of the junior year: Business 311, 315, 323, 327, and 330. Business 416 must be taken in the senior year, preferably in the last semester of undergraduate course work. Other business courses required (including Business 314) and elective, may be taken in any semester, provided the proper prerequisites are met.

For the subprogram in Accounting with a Certified Public Accountant (C.P.A.) orientation, the remaining requirements for the B.B.A. degree are:

Subject	Semester Credits
Business 301-302 (Intermediate Accounting)	6
Business 303 (Cost Accounting)	3
Business 318 (Quantitative Analysis for Business Decisions)	3
Business 342 (Business Law II)	3
Business 401 (Advanced Accounting)	3
Business 404 (Auditing)	3
Business 405 (Federal Taxation)	3
Business 407 (Seminar in Accounting)	3
Business 409 (Accounting Systems and Data Processing)	3
Elective	3
Total	33

For the subprogram in Accounting not C.P.A. oriented, the remaining requirements for the B.B.A. degree are:

Subject	Semester Credits
Business 301-302 (Intermediate Accounting)	6
Business 303 (Cost Accounting)	3
Business 401 (Advanced Accounting)	3
Business 405 (Federal Taxation)	3
Business 407 (Seminar in Accounting)	3
Business 409 (Accounting Systems and Data Processing)	3
Electives	12
Total	33

For the subprogram in Management the remaining requirements for the B.B.A. degree are:

Subject	Semester Credits
Business 315 (Industrial Relations)	3
Business 318 (Quantitative Analysis for Business Decisions)	3
Business electives	9

SCHOOL OF BUSINESS ADMINISTRATION

Electives	21
Total	33

ELECTIVE COURSES FOR NON-BUSINESS STUDENTS

A number of undergraduate students from other disciplines choose School of Business Administration courses as electives. The School of Business Administration welcomes such students, and in the interest of providing some breadth of subject matter particularly suggests the following courses, not necessarily in sequence. (Economics 101, 102 should precede taking Business 311 and Business 327).

- Business 311 (Principles of Marketing)
- Business 316 (Behavioral Science and the Business Organization)
- Business 327 (Principles of Management)
- Business 341 (Business Law I)
- Business 410 (Survey of Accounting)

It should be noted that no Business courses may be taken before the junior year, except Business 201-202 (Principles of Accounting), which may be taken in the sophomore year or later.

DESCRIPTION OF COURSES: ACCOUNTING

(Junior or higher standing is required before admission to any of the following courses, except that sophomore or higher standing is required for admission to Business 201-202.)

201-202. Principles of Accounting. *Fall and Spring* (3, 3) Staff.

The managerial uses of accounting reports and preparation of financial statements for external reporting. Included are performance and cost measurements, planning operations, and balance sheet, funds flow, and income statements.

301-302. Intermediate Accounting. *Fall and Spring.* (3, 3) Mr. Hoyle and Mr. Quinn. Prerequisites: *Bus. 201-202.*

An analysis of balance sheets and profit and loss statements, together with the theory of valuation underlying the various accounts used in these statements.

303. Cost Accounting. *Fall* (3) Mr. Bloom and Mr. Elgers. Prerequisites: *Bus. 201-202.*

Applications of cost analysis to inventory valuation and income determination. Planning and control of routine operations and nonroutine decisions. The course emphasizes the relevance of cost concepts to modern decision tools. Substantial use of problems and cases.

401. Advanced Accounting. *Fall* (3) Mr. Smith. Prerequisites: *Bus. 301-302,* or permission of the instructor.

A study of consolidated statements, partnership accounting, accounting for special sales arrangements, fiduciary accounting and fund accounting.

404. Auditing. *Fall* (3) Mr. Hoyle. Prerequisites: *Bus. 301-302.*

Auditing procedures through the application of auditing principles; standards and ethics; audit reports.

405. Federal Taxation. *Spring* (3) Mr. Smith.

An analysis of federal income tax laws. Development of conceptual awareness of federal income tax structure and tax planning, and gaining ability to determine solutions to tax difficulties confronting organizations.

407. Seminar in Accounting. *Spring* (3) Mr. Bloom, Mr. T. Williams. Prerequisites: *Bus. 301-302.*

Selected topics based upon controversial issues in accounting theory and practice.

SCHOOL OF BUSINESS ADMINISTRATION

409. Accounting Systems and Data Processing. Fall (3) Mr. Hawthorne. *Prerequisites:* Bus. 301-302.

The development, organization, design, analysis, and improvement of manual and automated business information systems.

410. Survey of Accounting. Spring (3) Mr. Dafashy.

A survey of the general field of accounting. Open to students of junior or higher standing not admitted to the School of Business Administration and not having taken Bus. 201 or 202.

DESCRIPTION OF COURSES: MANAGEMENT

(Junior or higher standing is required before admission to any of the following courses.)

311. Principles of Marketing. Fall and Spring (3) Mr. Downs, Mr. Stanley, and Mr. Messmer. *Prerequisites:* Econ. 101-102, or permission of the instructor.

A study of the role of marketing in business and the economy. Emphasis is on the examination of functions, institutions, and policies.

312. Marketing Problems. Spring (3) Mr. Downs and Mr. Messmer. *Prerequisites:* Econ. 101-102 or permission of the instructor and Bus. 311.

Managerial techniques in planning and executing marketing programs. Emphasis on decision making related to marketing segmentation, product innovation and positioning, pricing and promotion. Extensive use of cases, readings, and a management simulation.

314. Marketing Research. Fall (3) Mr. Messmer and Mr. Downs. *Prerequisite:* Bus. 311.

Introduction to fundamentals of marketing research. Use of research information in marketing decision making. Topics include research design, interrogative techniques, data collection methods, scaling, sampling, and alternative methods of data analysis. Students design and execute their own research project.

315. Industrial Relations. Fall and Spring (3) Mr. Cole, Mr. Liddell, and Mr. Solomon. *Prerequisite or corequisite,* Bus. 331.

A course to provide understanding of the principles, policies, and practices used to develop a sound industrial relations program. Topics included are job analysis, the employment process, employee development, wage and salary administration, labor relations, and union negotiation.

316. Behavioral Science and the Business Organization. Fall and Spring (3) Mr. Cole.

A study of human behavior, development, and motivation in the business organization. Attention is given to behavioral science research in administration.

318. Quantitative Analysis for Business Decisions. Fall and Spring (3) Mr. Flood and Mr. Haltiner. *Prerequisites:* Six credits in mathematics, and Business 331.

A course which integrates quantitative decision methods and the team approach to research problems of interest to management. Attention is given to probability theory, linear programming, and other quantitative approaches used in the analysis of business problems.

320. Advertising. Fall and Spring (3) Staff. *Prerequisites:* Econ. 101-102, or permission of the instructor.

A study of the relationship of demand stimulation to business management. Analysis of cases will emphasize the management of advertising campaigns, expenditures, and the integration of advertising efforts as part of the total marketing concept.

323. Financial Management. Fall and Spring (3) Mr. Sancetta and Mr. S. Williams. *Prerequisites:* Bus. 201-202, Bus. 311, Prerequisite or co-requisite.

SCHOOL OF BUSINESS ADMINISTRATION

An introductory course covering current and long-term financing of the firm, capital budgeting, dividend policies, and business expansion.

327. Principles of Management. *Fall and Spring* (3) Mr. Liddell and Mr. Maddocks. Prerequisites: Econ. 101-102, or permission of the instructor.

An introduction to the principles of management and their application to business. Emphasis is given to the development of a philosophy of management.

328. Management Use of Accounting Data. *Fall and Spring* (3) Mr. Dafashy. Prerequisites: Bus. 201-202 and 327, or taking Bus. 327 concurrently. (For Management subprogram students only.)

A course to enable more comprehensive analysis of decisions through accounting information. Emphasis is upon budgeting, cost concepts and applications.

329. Management of Small Business. *Fall* (3) Staff.

A study of the special problems, analysis, and decision-making involved in the management of small business.

330. Production Management. *Fall and Spring* (3) Mr. Maddocks and Mr. Tarleton. Prerequisites: Bus. 201-202 and Bus. 331, or taking Bus. 331 concurrently.

A course designed to familiarize the student with the production phase of business activity. Emphasis is on developing ability to use analytical methods in the design and operation of production systems.

331. Statistics. *Fall and Spring* (3) Mr. Dafashy and Mr. Flood. Prerequisite: Six credits in mathematics, or permission of the instructor.

Basic concepts of statistical analysis within a business environment. Attention is given to solution methods via use of the computer, with both batch and terminal applications presented.

334. Introduction to Management Information Systems. *Fall or Spring* (3) Mr. Hawthorne.

Terms, concepts, and methods associated with management information systems. Topics include history, life cycle, data representation, file concepts, programming languages, and applications related to functional business areas.

341. Business Law I. *Fall and Spring* (3) Mr. Mallue.

Contracts, sales, negotiable instruments and agency with emphasis on the Uniform Commercial Code.

342. Business Law II. *Spring* (3) Ms. Emden & Mr. Mallue. Prerequisite: Bus. 341.

Bailments and carriers, property, mortgages, secured transactions; partnerships, corporations, securities; antitrust and unfair competition, bankruptcy, trusts and insurance.

411. Managerial Economics. *Spring* (3) Staff. Prerequisites: Econ. 101-102.

A course to provide the student with an appreciation and basic understanding of the contributions of economics applied to the decision making process.

412. Business Logistics. *Spring* (3) Mr. Stanley. Prerequisites: Bus. 311, 327, 300, and 331.

A course to provide the student with an introduction to the total cost concept at top management level of all aspects of the physical distribution function.

414. Investments. *Spring* (3) Staff. Prerequisites: Bus. 201-202 and 323, or permission of the instructor.

An examination of the securities markets and the characteristics of the various types of

SCHOOL OF EDUCATION

securities for institutional and personal investment. Sources of investment information, approaches to investing, personal investment planning, and elements of analysis are introduced.

415. International Business Management. *Summer only* (3) Mr. Tarleton. Prerequisites: Bus. 201-202 and Econ. 101-102.

Introduction to international trade and finance including balance of payments and foreign exchange; organization and control of the multinational company; and cultural, economic, and political environment of foreign operations.

416. Business Policy. *Fall and Spring* (3) Mr. Warren. Prerequisite: Senior standing in the School of Business Administration, and Bus. 311, 323, 327, and 330.

The establishment of company-wide objectives and the subordinate plans and controls to accomplish them. This course integrates and builds upon the business administration body of knowledge to develop decision-making ability at the policy-making level of administration.

430. Special Projects. *Fall and Spring* (1, 2 or 3 credits) Staff. Prerequisite: Permission of the Associate Dean for Undergraduate Studies.

A course designed to accommodate independent business research and special projects. For individuals in the management sub-program, no more than three of the required nine business elective credits may be satisfied by this course.

STUDENT HONORS

Beta Gamma Sigma is the national honorary society which recognizes excellence of academic achievement in the Schools of Business Administration accredited by the American Assembly of Collegiate Schools of Business. Beta Gamma Sigma was founded in 1907 to encourage and reward scholarship and accomplishment in the field of business studies, to promote advancement of education in the science of business, and to foster principles of honesty and integrity in business practice.

GRADUATE PROGRAM

The School of Business Administration offers the degree of Master of Business Administration. For degree requirements and a full description of graduate work in Business Administration, write to the Associate Dean for Graduate Studies, School of Business Administration, for the School's Graduate Catalog.

School of Education

PROFESSORS YANKOVICH (Dean), BULLOCK, CHESSER, CLEM, EMANS (Associate Dean), GALFO, HERMANN (Director of Graduate Studies), LAVACH, MULLIKEN, and UNGER. ASSOCIATE PROFESSORS ADAIR, BLOOM, CONRAD, FLANAGAN, GARLAND, GEOFFROY, GLESE, GULESIAN, HANNY, LASHINGER, MAIDMENT, MESSIER, O'SHELL, PRILLAMAN, RIES, SYKES (Director of Educational Placement and Coordinator of Field Experiences), and WHEELER, ASSISTANT PROFESSORS BASS, BEERS, BUCKLEY, DELAUNE, KEYS, LOSITO, MATTHEWS and NELSON.

Programs of the School of Education are accredited by the National Council for the Accreditation of Teacher Education (NCATE). Students graduating from NCATE approved programs are eligible for certified teaching credentials in thirty other states. In addition, many graduate schools require graduation from an NCATE approved undergraduate program for admission.

SCHOOL OF EDUCATION

UNDERGRADUATE PROGRAMS OF STUDY

Those students who are admitted to the School of Education concentrate in either elementary education or secondary education. The successful completion of either of these programs will insure the student of receiving the Collegiate Professional Certificate from the State Board of Education of the Commonwealth of Virginia.

It is the philosophy of the School of Education that sound preparation for teaching must include study in the Arts and Sciences and study in professional education supplemented by a supervised teaching experience.

Procedures and Requirements for Admission to Undergraduate Concentration

Admission to Baccalaureate study at the College of William and Mary does not include admission to undergraduate concentration in the School of Education. Application for admission to the School of Education is made during the second semester of the sophomore year. Application forms and information regarding admissions procedures may be obtained from the Office of the Dean, School of Education.

The degree program in elementary education leads to both the Bachelor of Arts in Elementary Education degree and the Collegiate Professional Teaching Certificate endorsed for either grades NK-3 or grades 4-7. The specific endorsement is determined by the grades in which supervised teaching is done.

ELEMENTARY EDUCATION

Course Requirements for Elementary Teacher Certification and Elementary Education Degree

These courses, when appropriate, may also be applied to area and sequence requirements. State certification and School of Education degree requirements mandate that students certified to teach on the elementary level include the number of credits in the areas of study listed below at least to the extent recommended.

	<i>Reading</i>	<i>(6 sem. hrs.)</i>
Ed. 304—Teaching Reading in the Elementary School	Ed. 408—Diagnostic Teaching of Reading	
	<i>Language Arts</i>	<i>(12 sem. hrs.)</i>
A modern English grammar (Eng. 211 or 404)	Ed. 421—Childrens Literature	
English composition if not exempted (Eng. 101, 301, 401, or 402)	Speech 203	
	<i>Social Studies</i>	<i>(18 sem. hrs.)</i>
Economics (Econ 101 or 102)	Ed. 405—Teaching Social Studies in the Elementary School	
American History (Hist. 201 or 202)	Three social science electives chosen in consultation with advisor	

SCHOOL OF EDUCATION

	Mathematics *	(6 sem. hrs.)
Ed. 407—Teaching Mathematics in the Elementary School	Ed. 458—Mathematics for Elementary School Teachers or Math 106—Fundamental Concepts of Mathematics	
	Science	(7 sem. hrs.)
A science course which includes a laboratory section	Ed. 406—Teaching Science in the Elementary School	
	Art and Music	(6 sem. hrs.)
Fine Arts (F.A. 111 or 112)	Music 320	
	Health and Physical Education	(7 sem. hrs.)
P.E. 307 and the four activity courses taken for graduation		
	Foundations of Education	(9 sem. hrs.)
Ed. 301—Educational Psychology	Ed. 404—Cultural Foundations of Education	
Ed. 302—Human Growth and Development		
	Student Teaching	(6 sem. hrs.)
Ed. 401A—Supervised Teaching, grades NK-3		
or		
Ed.401B—Supervised Teaching, grades 4-7		

Professional Semester. The Professional Semester combines 15 hrs. (Ed. 405, 406, 404, and 401A or 401B) into one term of the senior year in order to facilitate a meaningful practicum experience.

In order to be permitted to undertake the professional semester at the elementary level, concentrators must have successfully completed Education 301, Educational Psychology; Education 302, Human Growth and Development; Education 304, Teaching Reading in the Elementary School. In addition, the Elementary Education concentrator must have the approval of his advisor to proceed with student teaching. A tubercular examination will be required of all students who will be in continual contact with pupils in the public schools.

It is necessary that students preregister for student teaching so that sufficient time is provided for making necessary arrangements with the cooperating school divisions. Preregistration must be done individually with the Office of Educational Placement. Preregistration for the subsequent Fall or Spring semester must be completed by April 15.

*It is recommended that elementary education concentrators take Ed. 407 and Ed. 458 although this may mean exceeding the 120 hrs. required for graduation. A second option (although not recommended) is Math 106 and Ed. 407.

SCHOOL OF EDUCATION

Electives

Electives should be selected in co-operation with an advisor from the School of Education. The number of elective credits varies depending upon performance on proficiency examinations and other such factors.

Graduation Requirements

Concentrators in Elementary Education are reminded of the fact that they may apply only thirty-three semester credits in education toward the one hundred and twenty academic credit hours required for graduation.

SECONDARY EDUCATION

The School of Education can arrange secondary education programs leading to certification in English, Languages, History and Social Sciences, Mathematics, Science, Music, Art, and Drama.

The student who wishes to prepare for teaching at the secondary level has three basic means of accomplishing this goal: The student may concentrate in Secondary Education, concentrate in the appropriate department of the Faculty of Arts and Sciences, or apply for an Interdisciplinary concentration. You are invited to discuss these alternatives with the area coordinator of the Division of Secondary Education.

If the student concentrates in Secondary Education, then it is necessary to follow the undergraduate admission procedures as outlined in the Undergraduate Catalog on page .

Those admitted who wish to prepare to teach a single subject pursue a program which includes, in addition to the professional sequence of eighteen semester hours, at least as many semester hours of study in the subject field as would be required for concentration in the appropriate department. In addition, those admitted to concentration in Secondary Education may pursue interdisciplinary programs of study which include the preparation need for certification to teach more than one subject, e.g., the endorsement in History and the Social Sciences or the endorsement in Mathematics and Science. Interdisciplinary programs typically include, in addition to the eighteen semester hours in Education, from forty to fifty semester hours of study in the teaching fields.

Each student should become familiar with the certification requirements of the State Department of Education in regard to an endorsement in his chosen subject field. In some instances, courses are required which may not be required by the department for concentration. Information about endorsement requirements may be obtained from the Office of Teacher Placement, School of Education.

The following program of professional preparation must be completed by all students preparing for secondary school teaching.

	<i>Semester Credits</i>
Education 301—Educational Psychology	3
Education 302—Human Growth and Development	3
<i>Professional Semester</i>	
Education 303—Instructional Materials and Methods	3
Education 402—Supervised Teaching	6
Education 404—Cultural Foundations of Education	<u>3</u>
TOTAL	18

The Professional Semester (Education 303, 402, and 404) is taken in either the Fall or Spring Semester of the senior year. Student teaching in either Foreign Languages, Science, or Mathematics is usually limited to the Spring Semester. It should be understood that the experiences in Education 303, 402, and 404 are integrated to the point where the typical concept of the relatively discrete course does not apply. For this reason, each student must register for the total Professional Semester. In addition to the twelve

SCHOOL OF EDUCATION

semester hours in Education, however, the student is permitted to carry one additional three semester hour course which may be in his field of concentration. The additional course must be one that is scheduled to meet in the late afternoon or the evening—in most cases, 3:00 p.m. or later.

Those students who wish to student teach at the secondary level, whether or not they are concentrating in the School of Education, must meet the following requirements.

- (1) May not take more than 15 credit hours or its equivalent during the semester of student teaching.
- (2) Must have the approval of the department of his concentration regarding the adequacy of his subject matter preparation.
- (3) Must have received credit for Education 301 and 302 with the grade of "C" or better in each of these courses.
- (4) Prior to enrollment in student teaching, must have completed an approved field experience.

A tubercular examination will be required of all students who will be in continual contact with pupils in the public schools.

Student teachers are placed in schools in the following school divisions: Charles City County, Williamsburg-James City County, York County, Hampton, and Newport News.

It is necessary that students preregister for student teaching so that sufficient time is provided for making necessary arrangements with the cooperating school divisions. Preregistration must be done individually with the Office of Educational Placement. Preregistration for the subsequent Fall or Spring semester must be completed by April 15.

DESCRIPTION OF COURSES

301. Educational Psychology. *Fall and Spring* (3) Mr. Ries.

A course in which current theories of learning are analyzed with emphasis upon the basic factors of motivation, learning, retention, and transfer. Special emphasis is placed on educational implications of empirical and theoretical findings.

302. Human Growth and Development. *Fall and Spring* (3) Mr. Lavach.

A course in which selected theories and research findings dealing with progressive human growth and development from conception to senescence are examined. Major emphasis is placed on genetics, sensory-motor development, cognition, personality, perception, and emotion. Educational implications are explored.

303. Instructional Materials and Methods. (3) Mr. Flanagan-Mathematics, *Spring*; Mr. Garland-Social Sciences, *Fall and Spring*; Mr. Giese-Natural Sciences, *Spring*; Mr. Gulesian-English, *Fall and Spring*; Mr. Hanny. All other areas, *Fall and Spring*. Part of the professional semester in secondary education. Prerequisites: Education 301, 302 and fifteen semester credits in the subject of teaching choice.

A basic course in instructional methodology and introduction to teaching materials.

304. Teaching Reading in the Elementary School. *Fall and Spring* (3) Mr. Lashinger.

A basic course in the fundamentals of instruction in reading. This course is concerned with the application of the principles of learning and child development to the teaching of reading and the related language arts.

S305. The Teaching of High School Latin. *Fall or Spring* (3) Mr. J. W. Jones.

Same as Latin 405.

400. Problems in Education. *Fall and Spring* (to be arranged) Staff.

A course designed for students who are capable of independent study under the direction of, and in consultation with, staff specialists. Students undertake study and research of educational problems of individual concern resulting from previous study or experience.

SCHOOL OF EDUCATION

401A. Supervised Teaching, Grades K-3. *Fall and Spring* (To be arranged) Staff. Prerequisites: Education 301, 302, 304, 305.

A student teaching experience offered as part of the professional semester for prospective elementary school teachers at the kindergarten and primary levels.

401B. Supervised Teaching, Grades 4-7. *Fall and Spring* (To be arranged) Staff. Prerequisites: Education 301, 302, 304, 305.

A student teaching experience offered as part of the professional semester for prospective elementary school teachers at the upper elementary level.

402. Supervised Teaching, Secondary Level. *Fall and Spring* (To be arranged) Mr. Flanagan, Mr. Garland, Mr. Giese, Mr. Gulesian, Mr. Hanny, and Mr. Nelson. Prerequisites: Education, 301, 302.

A student teaching experience offered as part of the professional semester for prospective secondary school teachers.

404. Cultural Foundations of Education. *Fall and Spring* (3) Mr. Losito, Mr. Unger. Part of the professional semester in both elementary and secondary education.

A course dealing with the development of educational traditions, philosophical constructs underlying American practices of education, and the analysis of contemporary problems in light of this historical and philosophical background.

405. Teaching Social Studies in the Elementary School. *Fall and Spring* (3) Mr. Wheeler. Part of the professional semester in elementary education.

A course in which the objectives, instructional strategies, and evaluation of social studies education at the elementary level are explored. Included are experiences in the design of instructional materials and in microteaching.

406. Teaching Science in the Elementary School *Fall and Spring* (3) Mr. Giese. Part of the professional semester in elementary education.

A course designed to acquaint the student with current curricular methods, materials and philosophies in elementary school science education. The student is taught to develop and identify science materials and approaches appropriate to the child's developmental level.

407. Teaching Mathematics in the Elementary School. *Fall* (3) Mr. Flanagan. Prerequisites: Mathematics 105, 106.

A course designed to supplement the prospective elementary school teacher's preparation in algebra and geometry while concentrating mainly on effective pedagogy and materials for the teaching of mathematics in grades K through 6.

408. Diagnostic Teaching of Reading. *Fall and Spring*; lectures three hours, three credits. Prerequisite: Ed. 304 or consent of the instructor. Staff.

A course which includes (1) techniques for the evaluation of reading progress, (2) an examination of difficulties frequently experienced by children in learning to read, (3) an examination of diagnostic techniques that can be used by the classroom teacher, (4) methods of differentiation of instruction to fit individual capabilities, and (5) various corrective methods for use in the classroom.

421. Children's Literature. *Fall and Spring* (3) Mrs. Delaune.

A course including the study of children's reading interests, criteria for selection of materials, practice in evaluating materials, and a survey of the history and trends in publishing children's books.

Facilities and Services

Learning Resources Center

(a) Curriculum Materials Library. In room 209 Jones Hall, a library of specific

THE SCHOOL OF EDUCATION

educational materials such as curricula, tests, media programs, teaching aids, elementary and secondary text books and some current educational publications is maintained. (b) *Media Resource Center*. Audio-visual equipment and supplies for instructional materials creation are maintained for the support of educational programs and the encouragement of creative educational practice in rooms 231 and 235 of Jones Hall.

Teacher Scholarships, Loans and Student Employment

Virginia Teacher's Scholarship/Loan

In addition to the financial assistance programs administered by the Director of Student Aid and Placement for the College, undergraduate students who are Virginia residents and who plan to concentrate in Education are eligible for Teacher Training Scholarships which are administered by the School of Education. These scholarships are made possible by an appropriation of the General Assembly of Virginia and are available to juniors, and seniors who plan to teach in the public schools of the Commonwealth. The scholarships are for \$450 per academic year and for proportionate amounts during the Summer Session. Inquiries should be addressed as follows:

The Director of Educational Placement and Coordinator of Field Experiences
School of Education
College of William and Mary
Williamsburg, Virginia 23185

Kappa Delta Pi Scholarship

The Alpha Xi Chapter of Kappa Delta Pi, national honor fraternity for teachers and students in Education, annually offers a \$150 scholarship to the student displaying combined scholarship and outstanding professional qualities. Inquiries should be directed to the Director of Educational Placement and Coordinator of Field Experiences.

Educational Placement

The School maintains an Educational Placement Office to assist its graduates who plan to teach or who are seeking changes in employment. No registration fee is charged, and all students enrolled in the School are urged to avail themselves of this service. If the students file and maintain complete records with the Placement Office, the office can be of assistance to those who go into teaching, not only at graduation, but also offer assistance to alumni making changes in their professional positions.

The Office of Educational Placement also provides the service of processing all applications for Virginia Teaching Certificates. Students should file applications for Teaching Certificates during the month of May prior to graduation. Certificates should be applied for even if the student does not plan to teach immediately after graduation. All questions regarding certification should be referred to the Office of Educational Placement.

Kappa Delta Pi

This honor society in Education was first organized in 1911, and Alpha Xi Chapter of the College of William and Mary was chartered in 1922. The purpose of Kappa Delta Pi is to encourage high professional, intellectual, and personal standards, and to recognize outstanding contributions to education. To this end the organization invites to membership persons who exhibit commendable personal qualities, worthy education ideals, and sound scholarship. The organization endeavors to maintain a high degree of professional fellowship among its members and to quicken professional growth by honoring achievement in educational work. Both men and women are eligible for membership.

Graduate Study

Graduate study is available for those who have completed with merit an undergraduate

THE SCHOOL OF MARINE SCIENCE

degree program at an accredited institution. The School of Education awards the degrees of Master of Arts in Education and Master of Education in a variety of fields. In addition, the Certificate of Advanced Study (thirty semester hours beyond the Master's degree) and the Doctor of Education degree are offered in Educational Administration, Higher Educational Administration, and Counseling. For complete course descriptions and detailed information relating to the graduate program consult the *School of Education Graduate Programs Catalog*, copies of which are available upon request from the Office of the Director of Graduate Studies, School of Education.

The School of Marine Science

PROFESSORS HARGIS (Dean), ANDREWS, BLACK, HAVEN, VAN ENGEL, WOOD, and ZEIGLER. ASSOCIATE PROFESSORS ANDERSON, BENDER, BIERI, BYRNE, DAVIS, FANG, GOLDSMITH, HAEFNER, KUO, LOESCH, LYNCH, MERRINER, MUNDAY, MUSICK, NEILSON, NICHOLS, PERKINS, THEBERGE, WASS, WEBB, WELCH, and ZUBKOFF. ASSISTANT PROFESSORS BOESCH, BOON, BURRESON, CASTAGNA, CHEN, CUEMAN, DUPUY, ENGEL, GRANT, HO, HYER, JURDAN, KATOR, KRAEUTER, MACINTYRE, ORTH, ROBERTS, RUDELL, RUZECKI, SERAFY, SILBERHORN, SMITH, STAMOUDIS, and WETZEL. INSTRUCTORS DAWES, DEGEGES, DIAZ, GORDON, HARTZBAND, HOBBS, JONES, LANIER, PLEASANTS, ROSENBAUM, SCHMIED, WARINNER, WOJCIK, and ZWERNER.

FACILITIES

Through the offerings of the School of Marine Science, a joint venture of the College and the Virginia Institute of Marine Science, an unusual opportunity is afforded students of Marine Science and Marine Fisheries Biology to take advanced undergraduate and graduate training at an active, year-round center of marine research.

Because its main campus is located at Gloucester Point on the York River, an important estuary with easy access to Chesapeake Bay and the nearby Atlantic, the Institute is admirably situated to conduct research and teaching in marine, estuarine, and freshwater biology and general hydrography. The secondary campus of the Eastern Shore Branch Laboratory at Wachapreague, Virginia, offers access to the embayments, salt marches, and barrier beaches of Virginia's Eastern Shore.

PROGRAM

The program of the School of Marine Science is primarily intended for the advanced student who wishes to specialize in Marine Science or Oceanography. The degrees offered are the Master of Arts and Doctor of Philosophy in Marine Science. Majors in Biological Oceanography (Marine Biology), General Oceanography and Marine Fisheries Biology are available at both levels. Within these general areas, study in several specialities may be undertaken—for example, Physical Oceanography, Geological Oceanography, Marine Pollution Biology, etc.

Though the courses offered by the School are primarily for graduate students, advanced undergraduates (juniors and seniors) may participate. For instance, Biology, Chemistry and Physics majors may enroll in suitable 400 level courses. An undergraduate major in Chemistry, Geology, Physics, or Psychology may work on a marine problem in his field of specialization. Consent of the Chairman of the student's major department is required to take problems courses in Marine Science.

In summer qualified undergraduate students may take advanced training in Invertebrate Ecology, Marine Science, Physiology, and other subjects as scheduled. Special summer research courses in Marine Science for qualified science teachers and undergraduate biology majors are offered as funds are available.

It is recommended that students who are seriously interested in Marine Science as a profession consult with the Dean of the School as early in their college careers as possible regarding an academic program to be followed.

THE SCHOOL OF MARINE SCIENCE

DESCRIPTION OF COURSES

401. Introduction to Physical Oceanography. Fall (3) Staff. Prerequisites: Physics 101-102, Math 103.

Physical properties of sea water, descriptive oceanography, air-sea interactions, heat budget, methods and measurements, dynamics of circulation, waves and tides. Lectures and laboratory.

402. Introduction to Chemical Oceanography. Spring (3) Staff. Prerequisite: Chemistry 101-102.

Chemical properties and their distribution in the sea, nutrients, carbon dioxide system, methods of sea water analysis. Lectures and laboratory.

403. Introduction to Biological Oceanography. Fall (3) Staff.

Introduction to principles and concepts of marine ecology; characteristics of the oceans and estuaries as ecosystems. Occurrence and distribution of marine organisms in relation to hydrography. Lectures, laboratory and field trips.

404. Introduction to Geological Oceanography. Spring (3) Mr. Boon, Mr. Hobbs.

Concepts of marine geology: coastal processes, seafloor spreading and continental drift, sediments and sedimentation, shelf and canyon development. Required of all students unless exemption is approved by the Dean of the School. Lectures and field trips.

‡405. Problems in Marine Science. Fall and Spring (1-4) Staff.

Supervised projects selected to suit the needs of the advanced undergraduate student. Projects to be chosen in consultation with the head of the student's major department, the supervising professor and the Dean of the School of Marine Science. Acceptable topic outlines and terminal project reports are required.

MS 406. Introduction to Marine Science. Summer session (5); Evening College (3) Staff.

A general introduction to marine science including biological, chemical, geological and physical oceanography. Lectures, laboratory and field trips, twenty-six hours per week for five weeks. Evening College course limited to three lecture hours and (3) semester hours credit.

407. Statistics for Marine Scientists I. Fall (3) Staff.

Application of statistical methods to analysis of biological and physical data. Binomial and chi-square distributions, normal distribution. Hypothesis testing, introduction to analysis of variance and regression analysis. Three lecture hours. Required of all students unless justification for exemption is approved by the Dean of the School of Marine Science.

‡410. Marine and Freshwater Invertebrates. Summer session (5) Staff.

Classification and identification, adaptation, ecology, life histories. Local marine, estuarine and freshwater forms emphasized. Lectures, laboratory and field trips, twenty-six hours per week for five weeks.

‡412. Marine Botany. Summer session (5) Staff.

A general introduction to the ecology and systematics of algae spermatophytes encountered in the marine environment. Lectures, laboratory and field trips, twenty-six hours per week for five weeks.

‡419. Computer Applications in Marine Science. As required (1) Mr. Wojcik.

Course designed primarily for students who require special Fortran programs for analysis of their research data. Following instruction in basics of programming language, each student will develop, with guidance, one or more computer programs pertinent to his or her thesis research. One lecture hour.

THE SCHOOL OF MARINE SCIENCE

#420. Workshop in Scientific Writing. Spring (1) Mr. Grant.

Step-by-step analysis of the preparation of a journal article; structure and content of research and thesis proposals. One lecture hour.

GRADUATE PROGRAM

The School of Marine Science offers the degrees of Master of Arts and Doctor of Philosophy. For graduate admission and degree requirements, and for a full description of graduate courses in marine science, write for a Graduate Catalog to the Dean of the School of Marine Science, Gloucester Point, Virginia 23062.



VI. MISCELLANEOUS INFORMATION

ENROLLMENT

SESSION 1976-77

	Male	Female	Total
Freshmen	514	635	1191
Sophomores	566	624	1190
Juniors	553	520	1073
Seniors	446	481	927
Law School	334	115	449
Graduate	527	423	950
Advanced Graduate	<u>161</u>	<u>112</u>	<u>273</u>
Total	3101	2910	6011

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

SESSION 1976-77

Austria	1
Bermuda	2
Belgium	4
Bahamas	1
Boliva	1
Brazil	2
China	12
Canada	4
Colombia	2
El Salvador	1
France	1
Greece	1
Germany	6
Hong Kong	1
India	1
Iran	1
Japan	2
Kenya	1
South Korea	3
Malta	1
Netherlands	1
Nether Antilles	1
Philippines	2
Puerto Rico	3
Taiwan	1
United Kingdom	8
Venezuela	1
Virgin Islands	1
Alabama	10
Alaska	1
Arizona	1
Arkansas	2
California	21
Colorado	5
Connecticut	72
Delaware	30

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

Florida	51
Georgia	21
Hawaii	4
Idaho	2
Illinois	30
Indiana	10
Iowa	10
Kentucky	11
Louisiana	4
Maine	3
Maryland	168
Massachusetts	45
Michigan	22
Minnesota	8
Mississippi	5
Missouri	8
Nebraska	1
Nevada	2
New Hampshire	7
New Jersey	298
New Mexico	2
New York	240
North Carolina	31
Ohio	53
Oklahoma	4
Oregon	4
Pennsylvania	222
Rhode Island	10
South Carolina	31
Tennessee	9
Texas	18
Utah	2
Vermont	5
Virginia	4413
Washington	7
West Virginia	11
Wisconsin	13
Washington, D. C.	<u>18</u>
	6011

INDEX

Academic Advising	47
Academic Regulations	47
Academic Scholarships	36
Academic Standing	49
Accounting	166
Administrative Offices, Directory of	5
Admission to the College	33
Admission, Undergraduate, to the School of Business Administration	164
Admission, Undergraduate, to the School of Education	170
Advanced Placement	50
Anthropology	57
Applied Music, Courses in	129
Area-Sequence Requirements	46
Beta Gamma Sigma	169
Biology	61
Board, Cost of	41
Board of Visitors	4
Business Administration, School of	163
Campus Map	COVER III
Certification of Teachers	170
Chancellors of The College	3
Changes in Registration	48
Chemistry	66
Chinese	115
Classical Civilization	72
Classical Studies	69
Classification of Students	49
Class Attendance	49
College Calendar	v
College Courses	74
Committees of the Board of Visitors	4
Comparative Literature	74
Computer Science	106, 110
Concentration Requirements and Fields of Concentration	47
Contents	iii
Continuance in College	49
Correspondence Directory	ii
Course Descriptions, Explanation of	56
Credit by Examination	50
Course of Study, Student's	47
Credits from Other Institutions	50
Dance	140
Degrees Offered	44
Degree Requirements for A.B. and B.S.	44
Degree Requirements for B.B.A.	164
Departmental Honors Program	52
Double Concentration	47
Economics	76
Education, School of	169
Educational Placement	175
Elementary Education	170
Emeriti Faculty	9
English Language and Literature	79
Enrollment—Session 1976-1977	179
Examinations	52
Exemption from Degree Requirements	45
Expenses	39
Evaluation of Credits from Other Institutions	50
Evaluation of Students	51

INDEX

Faculty	9
Faculty of Arts and Sciences	57
Fees	39
Fields of Concentration, Subprograms, and Course Descriptions	56
Financial Assistance for Students	36
Fine Arts	86
French	115
General Statement of Policy	COVER II
Geographical Distribution of Students, 1976-77	179
Geography	93
Geology	90
German	119
Government	94
Grading, System of	51
Graduate Degrees Offered	44
Greek	70
Harrison, James Pinckney Chair of History	104
Health Services Staff	31
History	99
Honors Programs, Departmental	52
Incidental Expenses	42
In-State Tuition, Eligibility for	40
Interdisciplinary Study	105
Italian	121
Kappa Delta Pi	175
Latin	71
Library Staff	31
Management	167
Marine Science, School of	176
Mathematics	106
Military Science (Army)	111
Modern Languages and Literatures	114
Music	125
Non-Virginia Students, Tuition and Fees	39
Objectives of the College	1
Officers of Administration	5
Pass/Fail	48, 51
Payment of Accounts	38
Philosophy	130
Physical Education	135
Physics	141
Portuguese	122
Pre-Engineering Program	54
Pre-Forestry Program	55
Pre-Medical and Pre-Dental Programs	54
Presidents of the College	3
Proficiency Requirements	46
Project PLUS	53, 144
Program, Student's Academic	48
Psychological Services Center Staff	32
Psychology	146
Quality Points	45, 51

INDEX

Refunds for Withdrawals	38
Registration Requirements for Student's Program	48
Registration, Changes in	48
Reinstatement	50
Religion	150
Requirements for Degrees	44
Residence Requirements for Degrees	45
Room Deposits	42
Room Rent	42
Reserve Officers' Training Corps	111
Russian	122
Scholarships	36
Secondary Education	172
Sequence Requirements	46
Sociology	154
Spanish	123
Special Programs, Academic	52
Special Scholarships	36
Speech, Courses in	163
Students' Accounts Due	38
Student Employment	37
Student's Program	48
Study Abroad	54
Teacher Education	169
Teacher Scholarships and Loans	175
Theatre	160
Transfer of Credit from Other Institutions	50
Tuition and Expenses	38
Waiver Privileges for Senior Citizens	COVER II
Walter G. Mason Visiting Professorship	154
Withdrawal from College	49

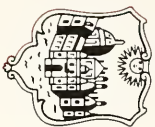


THE CAMPUS OF
THE COLLEGE OF
WILLIAM AND MARY
IN VIRGINIA

KEY FOR VISITORS

- | | | |
|--|---------------------------------------|--|
| 1. SIR CHRISTOPHER WREN BUILDING | 20. WILLIAM AND MARY HALL | 39. BARRETT HALL |
| 2. THE BRAFFERTON | 21. TENNIS COURTS | 40. JEFFERSON HALL |
| 3. THE PRESIDENT'S HOUSE | 22. WILLIAM AND MARY COMMONS | 41. COLLEGE BOOKSTORE |
| 4. EWELL HALL | 23. BOTETOURT RESIDENCE COMPLEX | 42. TALIAFERRO HALL |
| 5. WASHINGTON HALL | 24. DuPONT HALL | 43. CAMPUS CENTER |
| 6. JAMES BLAIR HALL | 25. ADAIR GYMNASIUM | 44. TYLER HALL |
| 7. OLD ROGERS HALL | 26. TENNIS COURTS | 45. HUNT HALL |
| 8. MARSHALL-WYTHE SCHOOL OF LAW | 27. RICHARD LEE MORTON HALL | 46. TRINKLE HALL |
| 9. PSYCHOLOGICAL COUNSELING CENTER | 28. HUGH JONES HALL | 47. CAMPUS POLICE OFFICE |
| 10. BROWN HALL | 29. WILLIAM SMALL PHYSICAL LABORATORY | 48. HEATING PLANT |
| 11. SORORITY COURT | 30. PHI BETA KAPPA MEMORIAL HALL | 49. NATIONAL CENTER FOR STATE COURTS
(under construction) |
| 12. MONROE HALL | 31. ROBERT ANDREWS HALL | 50. NEW LAW SCHOOL (proposed) |
| 13. BLOW GYMNASIUM | 32. EARL GREGG SWEM LIBRARY | |
| 14. OLD DOMINION HALL | 33. STUDENT HEALTH CENTER | |
| 15. BRYAN COMPLEX | 34. OLD LODGES | |
| 16. CARY FIELD | 35. JOHN MILLINGTON HALL | |
| 17. ALUMNI HOUSE | 36. ROGERS HALL | A. Wren Courtyard |
| 18. FRATERNITY LODGES SPECIAL INTEREST HOUSING | 37. LANDRUM HALL | B. J.T. Baldwin Memorial Garden |
| 19. YATES HALL | 38. CHANDLER HALL | C. Sunken Garden |
| | | D. Crim Dell |

The
College of
William
&
Stearns
in
Virginia



UNDERGRADUATE
CATALOG

1977-1978

Non-Profit
Organization
U. S. Postage
P. A. I. D.
Williamsburg
Virginia
Permit No. 26