James Madison University

Graduate Catalog

1977-78
For further information concerning graduate study at James Madison University write:

Dean of the
Graduate School
James Madison University
Harrisonburg, Va. 22801

The name on the cover reflects the name James Madison University, as adopted by the Virginia General Assembly and is effective July 1, 1977. Due to printing dates, material in this catalog reflects the old name, Madison College. All references to Madison College are to be considered as references to James Madison University.

JAMES MADISON UNIVERSITY
Catalog Issue
Volume XXXIV, Number 2
March, 1977

Statements in this catalog concerning regulations, fees, the academic calendar, and other matters are subject to change. Requests should be made through the Graduate School Office for the current Schedule of Classes. The telephone number of the Graduate School is (703) 433-6131.
MADISON COLLEGE
GRADUATE SCHOOL

ACCREDITED BY: Southern Association of Colleges and Schools, National Council for Accreditation of Teacher Education for Preparation of Elementary Teachers and Secondary Teachers with the Master's Degree as the Highest Degree Offered, Virginia State Board of Education, National Association of Schools of Music.


CORPORATE MEMBER OF: American Association of University Women.
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Graduate Academic Calendar

1977

1977 MAY SESSION

May 8—Residence Halls open 9:00 a.m. Dining Hall opens 4:00 p.m.
May 9—Registration for May Session ONLY. For detailed dates and times, see Schedule of Classes, Summer Session, 1977.
May 10—Classes meet as scheduled.
May 12—Last day of course changes without a $5.00 fee. Last day to add a course.
May 20—Last day to withdraw from a course.
May 20—Deadline for filing with Educational Testing Service for the Graduate Record Examination to be given on June 11.
May 27—Final Examinations.
May 27—Dining Hall closes 3:00 p.m. Residence Halls close 7:00 p.m.

1977 SUMMER SESSION

First Four-Week Term

June 11—Graduate Record Examination.
June 12—Residence Halls open 9:00 a.m. Dining Hall opens 4:00 p.m.
June 13—Registration. For detailed dates and times, see Schedule of Classes, Summer Session, 1977.
June 14—Classes meet as scheduled.
June 16—Last day to add a course for the First Four-Week Term. Last day to change a Four-Week Term course without a $5.00 fee.
June 30—Last day to withdraw from a First Four-Week Term course.
June 30—Diploma fee due for graduates meeting Master's degree requirements in August.
July 4—Holiday. Classes do not meet.
July 8—Final Examination for First Four-Week Courses.

Eight Week Term

June 12—Residence Halls open 9:00 a.m. Dining Hall opens 4:00 p.m.
June 13—Registration. For detailed dates and times, see Schedule of Classes, Summer Session, 1977.
June 14—Classes meet as scheduled.
June 21—Last day to add a course for the Eight-Week Term. Last day to change an Eight-Week Term course without a $5.00 fee.
June 30—Diploma fee due for August Master's graduation.

July 4—Holiday. Classes do not meet.
July 8—Deadline for filing application for August graduation with Graduate School Office.
July 11—Study Day. Classes do not meet.
July 12—Last day to withdraw from an Eight-Week Term course.

August 5—Final Examinations. Dining Hall closes 6:00 p.m.
August 6—Residence Halls close 10:00 a.m.

Second Four-Week Term

July 11—Course changes and registration. For detailed dates and times, see Schedule of Classes, Summer Session, 1977.
July 12—Classes meet as scheduled.
July 14—Last day to add a Second Four-Week Term course. Last day to change a Second Four-Week Term course without a $5.00 fee.
July 15—Deadline for filing thesis with Graduate School for August graduation.
July 27—Last day to withdraw from a Second Four-Week Term course.

August 5—Final Examinations. Dining Hall closes 6:00 p.m.
August 5—Commencement 7:00 p.m.
August 6—Residence Halls close 10:00 a.m.

1977 FALL SEMESTER

August 29—Registration of full-time and part-time Graduate Students. For detailed dates and times, see Schedule of Classes, Fall Semester, 1977.
August 31—Classes meet as scheduled.

September 5—Labor Day. Classes meet.
September 7—Last day on which applications for course changes may be made without payment of $5.00 fee. Last day to add a new course.
September 10—Government Day.
September 12—Diploma fee due for graduates meeting Master's degree requirements in December.
### 1977

**OCTOBER**

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<td>23 24 25 26 27 28 29 30 31</td>
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- October 1—Parents' Day.
- October 15—Graduate Record Examination.
- October 24—Holiday. Classes do not meet.
- October 29—Homecoming.

**NOVEMBER**

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<td>27 28 29 30</td>
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- November 9—Last day to withdraw from a semester course.
- November 23—Thanksgiving vacation begins 5:00 p.m. Dining Hall closes 2:00 p.m. Residence Halls close 5:00 p.m.
- November 27—Residence Halls open 12:00 Noon. Dining Hall opens 4:30 p.m.
- November 28—Thanksgiving vacation ends and classes resume.

**DECEMBER**

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<td>25 26 27 28 29 30 31</td>
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- December 2—Deadline for Comprehensives.
- December 9—Last day of classes.
- December 9—Last day to complete 1977 Spring Semester and 1977 Summer Term "Incomplete" grades and for faculty to turn in these grades to the Records Office.
- December 10—Reading Day.
- December 12-16—Final Examinations.
- December 16—Residence Halls close 5:00 p.m. Dining Hall closes 2:00 p.m.
- December 17—Graduation (no commencement exercise).

### 1978 SPRING SEMESTER

**JANUARY**

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<td>22 23 24 25 26 27 28</td>
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- January 7—Graduate Record Examination.
- January 9—Registration of full-time and part-time Graduate Students. For detailed dates and times, see Schedule of Classes, Spring Semester, 1978.
- January 11—Classes meet as scheduled.
- January 18—Last day on which applications for course changes may be made without payment of $5.00 fee. Last day to add a new course.
- January 30—Diploma fee due for graduates meeting Master’s degree requirements in May.
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<td>March 17</td>
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<td>March 17-24</td>
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<td>March 29</td>
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<td>April 6</td>
<td>Last day for filing application for May graduation with Graduate School.</td>
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<td>May 6</td>
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<tr>
<td>May 6</td>
<td>Commencement 10:00 a.m.</td>
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**FEBRUARY**

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**MARCH**

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**S M T W T F S**

**APRIL**

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**S M T W T F S**

**MAY**

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LEON C. SMITH, Associate Professor of Communication Arts. A.B., University of North Carolina; M.A., Clemson University; Ph.D., Ohio University.

WILLIAM D. SMITH, Associate Professor of Secondary Education and School Administration. B.S., Ph.D., University of Maryland; M.A.T., Purdue University.

RAY V. SONNER, Professor of Secondary Education and School Administration. B.A., Lynchburg College; M.Ed., Ed.D., University of Virginia.

JON A. STAIB, Associate Professor of Physics. B.S., University of Toledo; M.S., Case Institute of Technology; Ph.D., Case Western Reserve University.


PAUL H. STEAGALL, JR., Professor of Business Education and Office Administration. B.S., M.Ed., Virginia Polytechnic Institute; Ph.D., The Ohio State University.

DAVID L. STEINBERG, Assistant Professor of Library Science and Educational Media. B.S., Central Missouri State College; M.S.L.S., University of North Carolina; Ph.D., Arizona State University.

BARBARA NELL STONE, Associate Professor of Sociology. A.B., The George Washington University; M.A., University of Tennessee; Ed.D., Boston University.

JOHN E. STURM, Associate Professor of Secondary Education and School Administration. A.B., Bowdoin College; M.Ed., University of New Hampshire; Ed.D., University of Massachusetts.

CARL D. SWANSON, Associate Professor of Psychology. B.S., J.D., Washington and Lee University; M.A., Ed.D., Western Michigan University.
JOHN SWEIGART, *Professor of Philosophy*. A.B., Lafayette College; Ph.D., University of Pennsylvania.

HELEN M. SWINK, *Associate Professor of English*. B.S., West Virginia University; M.A.Ed., Madison College; Ph.D., University of Virginia.

KENNETH ALLEN SZMAGAJ, *Assistant Professor of Art*. B.F.A., Wayne State University; M.A., M.F.A., University of Iowa.

GERALD R. TAYLOR, JR., *Associate Professor of Physics*. B.S., M.S., Virginia Polytechnic Institute; Ph.D., University of Virginia.


JIMMIE H. TRAVELSTEAD, *Assistant Professor of Education*. B.A., M.A., University of New Mexico.

HAROLD R. TRAVIS, *Assistant Professor of Physical and Health Education*. B.A., Wesleyan University; M.S., Ph.D., Oregon State University.

GILBERT S. TRELAWNY, *Professor of Biology*. B.S., Delaware Valley College of Science and Agriculture; M.S., Ph.D., Lehigh University.

K. THOMAS VARGHESE, *Associate Professor of Economics*. B.A., University of Travancore (India); B.Com., University of Kerala (India); M.A. (Psyc), M.B.A., M.A. (Econ.), Ph.D., Wayne State University.


GEORGE A. WEST, *Professor of Music*. B.M., Oberlin Conservatory of Music; M.M., Ph.D., Michigan State University.

HOWARD M. WILHELM, *Associate Professor of Economics*. B.A., University of Virginia; M.A.Ed., Madison College; Ed.D., University of Virginia.
JACK H. WILLIAMS, **Professor of Sociology.** B.S., M.S., Northern Illinois University; Ph.D., Emory University.

JANET WINSTEAD, **Associate Professor of Biology.** B.S., Midwestern University; M.S., Ohio University; Ph.D., University of Texas at Austin.

JOHN E. WOOD, **Professor of History.** B.A., University of Virginia; M.A., Ph.D., Tulane University.

BEN E. WRIGHT, **Associate Professor of Music.** B.A., Arkansas Polytechnic College; M.M.Ed., Louisiana State University; Ed.D., University of Northern Colorado.

BARBARA JEANNE WYANCKO, **Assistant Professor of Art.** B.A.E., M.F.A., University of Kansas.

RONALD J. WYANCKO, **Assistant Professor of Art.** B.F.A., University of Kansas; M.A., Arizona State University; M.F.A., University of Kansas.

CHONG-KUN YOON, **Associate Professor of History.** B.A., University of Oregon; M.A., Ph.D., The American University.

FRANK ZHAN, **Professor of Economics.** B.A., University of San Francisco; Ph.D., University of California at Santa Barbara.
MADISON COLLEGE

THE

GRADUATE PROGRAM

OF

MADISON COLLEGE

HISTORY

Madison College's Graduate School was established in 1954, when authorization by the State Board of Education made it possible for the College to offer programs leading to the degrees of *Master of Arts in Education* and *Master of Science in Education*. The Southern Association of Colleges and Schools approved these graduate programs the same year. On October 31, 1960, the State Board of Education authorized the College to offer programs leading to the *Master of Science* degree with majors in Biology and Mathematics. This degree was extended, with approval by the State Council of Higher Education, in 1974, to include a major in Physical Education. Subsequent actions of the State Council permitted the College to offer the *Master of Arts* degree in Art, English, and History, and the *Master of Business Administration* degree. In 1973, authorization was given to offer the *Master of Arts in Teaching* and the *Master of Education* degrees. The *Master of Music Education* degree was authorized in 1974.

PURPOSE

A Master's degree must attest to the completion of a defined program of study beyond and depending upon the baccalaureate degree. Under the direction of scholars in full command of their discipline, graduate study, because of its dependency on other levels, exercises a special influence on the soundness of all formal education. An institution's reputation and usefulness, therefore, is determined by the quality of its programs.

The graduate program was inaugurated at Madison College to
provide teachers with an opportunity to improve their competencies through greater subject matter mastery in their respective areas of teaching and by increased professional skills through further study in professional education. This remains an important function of the graduate program, but graduate programs are now available in a number of academic fields for students who desire to pursue advanced study and research.

ADMINISTRATION

In the organization and administration of the Graduate School, the Commission on Graduate Studies and Research of the College Council, the Graduate Academic Review Board, the Graduate Faculty as a body, and the Dean of the Graduate School play significant roles.

Commission on Graduate Studies and Research

The Commission on Graduate Studies and Research of the College Council has responsibility for recommending to the College Council long-range planning and the development of general policies affecting the Graduate School and its role in accomplishing the overall objectives of the College.

The Graduate Academic Review Board

The Graduate Academic Review Board has responsibility for implementing the plans and policies affecting the Graduate School, and for the approval of graduate courses, appointments to the Graduate Faculty, and degree requirements.

The Graduate Faculty

The Graduate Faculty as a body has responsibility for final approval of the award of graduate degrees and serves as an appellate body when decisions of the Graduate Academic Review Board are appealed by a minimum of three members of the Graduate Academic Review Board.

The Graduate Faculty convenes at three regular meetings during the academic year, and on special occasions as required.
Dean of the Graduate School

The Dean of the Graduate School has responsibility for administering the Graduate School under the broad policy guidance of the Commission on Graduate Studies and Research and the Graduate Academic Review Board. He serves as chairman of the Graduate Commission and of the Graduate Academic Review Board, and as such is responsible for scheduling meetings and the conduct of business of those bodies.

PROGRAMS OF GRADUATE STUDY

The Graduate School of Madison College offers the following programs of Graduate Study:

Major Programs

Master of Arts (M.A.)
   Art*
   English*
   History*
   Psychology*

Master of Science (M.S.)
   Biology*
   Mathematics*
   Physical Education*
   Speech Pathology*

Master of Business Administration (M.B.A.)*

Master of Arts in Education (M.A.Ed.)
   Social Science

Master of Science in Education (M.S.Ed.)
   Business Education
   Physical and Health Education
   Physics
Master of Arts in Teaching (M.A.T.)
  Biology
  English
  History
  Mathematics

Master of Music Education (M.M.Ed.)

Master of Education (M.Ed.)
  Counselor Education*
  Early Childhood Education*
  Elementary Education
  Hearing Disorders*
  Reading Education*
  School Administration*
  School Library Media Services*
  School Psychology*
  Secondary Education
  Special Education*

Minors are offered in the following fields where the major is in Elementary or Secondary Education, leading to the Master of Education degree:

  Art
  Biology
  Business Education
  Communication Arts
  Economics
  English
  Geology
  Gifted Education
  History
  Library Science
  Mathematics
  Music

*Minor not authorized.
Minors are offered in the following fields of education where students are majoring in programs leading to the Master of Arts in Education (M.A.Ed.), the Master of Science in Education (M.S.Ed.), or the Master of Music Education (M.M.Ed.) degrees:

- Elementary Education
- Secondary Education
- Higher Education

All programs of study leading to advanced degrees are available to students enrolled in the regular academic year sessions, including the evening programs, and in the summer session.

Graduate degrees are conferred upon students who satisfactorily complete stated requirements. An individual program of study is planned by each student with his adviser in conformance with specific requirements for the degree. Programs of study require the approval of the major Department Head and the Dean of the Graduate School.

Although the requirements for graduate degrees at Madison College include thirty (30) or more semester hours credit, the student should be aware that this is a minimum requirement and should in no way be regarded as a limiting factor in the formulation of a program of graduate study. It should be clearly understood that the graduate degree is not given as a certificate of residence or for duties performed, but is awarded only to students who give evidence of sound scholarship and proficiency in research in their fields of specialization.

**Graduate Degrees**

The Master of Arts (M.A.) and Master of Science (M.S.) degrees are available to students who desire graduate work exclusively within their chosen discipline. Minors are not authorized.
The Master of Arts in Education (M.A.Ed.), Master of Science in Education (M.S.Ed.) and the Master of Music Education (M.M.Ed.) degrees are available in a limited number of areas. Students pursuing these degrees must satisfactorily complete a major in a subject-matter field consisting of a minimum of twenty-one (21) semester hours of graduate credit and a minor in Elementary, Secondary, or Higher Education consisting of a minimum of nine (9) semester hours.

The Master of Arts in Teaching (M.A.T.) degree is available to students seeking careers in public school teaching at the secondary or post-secondary level. Students pursuing this degree are required to satisfactorily complete twenty-one (21) semester hours in a subject-matter field(s) and twelve (12) semester hours of graduate credit in professional education.

The Master of Business Administration (M.B.A.) degree is available to students who desire advanced work in Business Administration. Minors are not authorized.

The Master of Education (M.Ed.) degree is available to students seeking careers in the education professions. Typically, all of their graduate course work is taken in their professional field. Students majoring in Secondary Education would not normally be seeking advanced preparation for classroom teaching. These students are required to take eighteen (18) semester hours of course work in professional education and may elect a minor in a subject matter field.

ADMISSION TO THE GRADUATE SCHOOL

Application forms for admission to the Graduate School of Madison College may be obtained from the Office of the Graduate School. Application forms should be completed and returned at least thirty (30) days before registration.

Applications for admissions will be considered without regard to race, color, sex, or national origin of individuals.

The applicant must take the responsibility for requesting all colleges and universities in which previous work has been done to submit
official transcripts directly to the Dean of the Graduate School. A completed medical form is required for all full-time applicants. A statement of good health signed by a physician must be submitted to the Office of the Graduate School by part-time students. A ten dollar ($10) application fee, payable once only and non-refundable, is required of all applicants.

Action will not be taken on a student's application until all credentials have been received.

It is strongly recommended that the applicant submit as part of the application for admission to the Graduate School an official record of scores on the Aptitude Test of the Graduate Record Examination (GRE). If not submitted at this time, the student must submit an acceptable score during his first semester in residence, or prior to the completion of nine semester hours of graduate study. The Advanced Test (in the area of specialization) may be required upon recommendation of the Department Head or major adviser. Scores dated more than five years will not be considered.

Applicants for the Master of Business Administration degree will be required to take the Graduate Management Admission Test (GMAT) instead of the Graduate Record Examination.

All foreign student applicants must submit satisfactory scores on the Test of English as a Foreign Language (TOEFL) and a financial statement as part of their application for admission.

For additional departmental requirements, see the appropriate departmental section of the catalog.

Applications for admission to the Graduate School will be reviewed by the Heads of the Departments in which the applicant wishes to major and minor. The applicant must be accepted by the departments in which he desires to study and be approved by the Dean of the Graduate School. The student will be notified of the disposition of his application by the Office of the Graduate School.

Applicants may be admitted to the Graduate School of Madison College or to graduate study at Madison College under three classifications: Unconditional, Conditional, or Non-Degree Admission.
Unconditional Admission is admission to a graduate program without reservation and indicates a sound academic background in preparation for a specific program of graduate study. Students cannot gain Unconditional status until the Graduate Record Examination or Graduate Management Admission Test requirements are met.

Conditional Admission is admission to a graduate program with reservations as indicated in the letter of acceptance. Such reservations are usually academic deficiencies in undergraduate preparation which must be removed by the applicant. Upon removal of the conditions, the student must make a written request for a change of status to Unconditional, directed to the Dean of the Graduate School.

Non-Degree Admission is admission for graduate study but does not constitute admission to a graduate program. If a non-degree graduate student should, at a later date, wish to change his admission status, he must make a written request to the Dean of the Graduate School. Such petitions will be processed as applications for regular admission. Approval for graduate credit of courses taken while enrolled in a non-degree status will be determined by the Dean of the Graduate School upon recommendation of the appropriate Department Head. A maximum of twelve hours of graduate credit taken in non-degree status may be transferred to a degree program upon the recommendation of the department head and approval by the Dean of the Graduate School. (See requirements of the Biology Department for the Master of Science degree.) Only six hours of 500-level workshop courses can be applied to a degree program.

Transient Admission (non-degree status) is accorded to those students who have already been admitted to graduate studies at another institution and desire only to earn graduate credits for transfer to that institution. Admission for such persons requires written approval from the applicant’s home institution and special approval from the Dean of the Graduate School.

POST-BACCALAUREATE STUDY

Baccalaureate degree graduates of accredited institutions who want to take undergraduate courses or 500-level courses for undergraduate
credit may be admitted as Post-Baccalaureate students by applying to the Undergraduate Admissions Office, Varner House.

STATE RESIDENCY

Students who intend to apply for residency within the State should contact the Graduate Office for information concerning procedures to be followed during the initial stages of graduate study.

ADMISSION OF VETERANS

The Graduate School encourages veterans to apply for admission as full- or part-time students. For information related to veteran’s benefits, contact the Veterans Coordinator, the Records Office, Wilson Hall, Madison College.

STUDENT SERVICES

GRADUATE STUDENT HOUSING

On-campus housing is not available to graduate students during the regular terms. Students interested in on-campus housing during the summer session should make arrangements with the Office of Residence Halls.

To obtain information about off-campus housing available in the Harrisonburg area students should contact the Office of Residence Halls and Commuting Student Services, Room 101, Alumnae Hall. Questions relating to lease difficulties, landlord relationships, parking and transportation, or other concerns may be referred to the Assistant Director for Commuting Student Services also located in Room 101.

THE COUNSELING CENTER

Counseling Center services are available to all undergraduate and graduate students, faculty and staff seeking confidential help in the clarification and resolution of personal, vocational or educational problems which may interfere with a successful college or life experience. The Counseling Center is located on the second floor of Alumnae Hall and its services are available without charge.
The Center is staffed by psychologists and a study skills coordinator. Their primary responsibility is to provide professional assistance in an atmosphere which enables a person to make his own decisions and choices and assures his right to self-determination. A close professional relationship is maintained between the counseling Center staff and the college psychiatrist.

Regardless of the type of problem presented by the student, all information with respect to the student’s relationship to the Counseling Center is completely private and confidential.

THE WARREN CAMPUS CENTER

The Campus Center acts as the base from which most student activities originate. The facilities in the Campus Center include a restaurant, ballrooms, meeting rooms, television room, faculty lounge, general lounge, study lounge, recreation area, employment office, craft center, bookstore, bank, post office, print shop, Student Government offices, Honor Council office, Bluestone office, Greek offices, Programming office and Directorate offices. There is also a Book For Sale board and Ride Board located in the building. Camping equipment is also available here for rental by students.

There are at least two movies every week and approximately five major concerts per year. In addition to these programs the Campus Program Board (made up entirely of students) sponsors entertainment through the NEC-Coffee House Circuit, Dinner Theatres, Dances and Video Tape presentations.

The Student Activities office also offers mini-courses in canoeing, candle making, leather crafts, basic mechanics, auto racing, basic camping techniques and others.

GENERAL REGULATIONS AND PROCEDURES

All graduate students are expected to assume full responsibility for all regulations and procedures of the Graduate School as set forth in this publication.
HONOR CODE

Graduate students are expected to abide by the Honor Code of Madison College. Violations of the Honor Code necessitating suspension or dismissal are subject to review by the Graduate Academic Review Board.

UNSATISFACTORY PROGRESS

If at any time, the graduate student fails to make satisfactory progress toward the degree, he may be denied permission to continue his graduate program. Such a decision may be reached by the student's adviser or by the Department Head and recommended to the Dean of the Graduate School for action.

A student who has been admitted to the Graduate School is automatically placed on probation if he receives a grade of "C" in any two courses. Probation is a warning that achievement is not satisfactory. A student will be dropped from a degree program if he receives an "F" in any graduate course or if he receives the grade of "C" in three graduate courses.

A student who has been dropped from a Graduate Program may, if he wishes, continue to take graduate courses as a Non-Degree graduate student with the approval of the Dean of the Graduate School.

EXCEPTIONS TO REGULATIONS

Any exception to the published rules and regulations may be requested by petition to the Graduate Academic Review Board. Such petitions must be initiated by the graduate student with the written approval of the student's adviser and the Department Head and must mention the regulation and justify completely the exception being requested.

FACULTY ADVISERS

The Heads of Departments or designated members of the graduate faculty, will serve as faculty advisers. After admission to the graduate program, the student pursuing a degree program will meet with his assigned faculty advisers to plan his program of study. Additional
committee members may be appointed as needed to direct the thesis or to conduct the comprehensive examination.

The student’s advisers are available for assisting the student in planning his program of study, for any subsequent changes in the program of study, for the conduct of the final examination, and for other phases of the specific requirements for the graduate degree.

Non-degree students will also be assigned an adviser to approve courses for which the student plans to register.

PROGRAM OF STUDY

Prior to the end of the first semester of enrollment in a graduate program, the student will meet with his faculty adviser(s) to plan his Program of Study. The Program of Study form must be approved by major and minor (if appropriate) adviser(s), the major Department Head, and the Dean of the Graduate School. Only six semester hours of workshop courses may be applied toward a degree. If applicable, credits in transfer should be included on the Program of Study. Any changes in the Program of Study are forwarded to the Dean of the Graduate School on the appropriate form and with the required signatures for his action.

ADMISSION TO CANDIDACY

A student may be admitted to candidacy upon the recommendation of the major adviser after (1) the completion of twelve (12) semester hours of acceptable work, (2) the submission of satisfactory scores on the Graduate Record Examination or the Graduate Management Admission Test, and (3) the forwarding of a properly approved Program of Study form (and thesis outline, if a thesis is to be written). A written request for Admission to Candidacy directed to the Dean of the Graduate School and endorsed by the major adviser must be made by the student not later than the end of the second week of classes in the academic term in which he plans to be graduated.

COURSE LEVEL REQUIREMENTS

At least one-half of the credits contained in the student’s program leading to an advanced degree at Madison College will be in courses
designated as exclusively for graduate students (i.e., courses numbered 600 or above). Where the program has a minor, at least six (6) of these 600-level credits must be in the minor.

TEACHING CERTIFICATES

If candidates in programs leading to the Master of Arts in Teaching, Master of Arts in Education or Master of Science in Education degrees and in certain programs leading to the Master of Education degree do not hold the Collegiate Professional Certificate, the requirements for such a certificate must be met before the degree is conferred unless this requirement is waived by the Dean of the Graduate School. As a general exception, students minoring in Higher Education are not required to hold the Collegiate Professional Certificate.

RESEARCH AND THESIS

A thesis written as the result of the successful completion of a research project is required of all candidates for the Master of Science degree with a major in Biology. In other Masters programs a research project and the writing of a thesis is an option which may be elected by the student.

Six (6) semester hours of graduate credit in the major field will be allowed for the research and thesis. Students may register for thesis for 2, 3, or 6 credit hours during those semesters in which they are engaged in research or thesis activity. The thesis will consist of a written interpretation of facts and opinions gained through critical reading and independent research, and will include an adequate analysis of the assembled data.

For those students who submit a thesis in partial fulfillment of the requirement for a graduate degree at Madison College, the following steps will be completed:

1. With the guidance of the professor under whom the research will be conducted, the student will choose a subject area and prepare a thesis outline.

2. Initial approval of the thesis outline is to be obtained from the
department as early as possible in the research program. This will be evidenced by written approvals on the student’s Program of Study by his thesis supervisor and the Department Head.

The thesis supervisor serves as chairman of the thesis committee, which shall include at least two other persons in the department. An additional person outside the major department may be recommended to be added to the committee.

3. *Form and Style in Thesis Writing* by William G. Campbell is to be used as a guide in thesis writing, unless the major department has specified another style manual.

4. Three unbound copies of the thesis, approved by the thesis committee, will be filed with the Office of the Graduate School not later than fifteen (15) days before the expected date of graduation. An abstract of the thesis consisting of not more than six hundred words is required to be filed with the thesis.

No grades will be given for thesis until the research has been completed and the thesis written. The thesis grade will then be recorded as either Satisfactory or Unsatisfactory. For the purpose of registration and payment of fees, each thesis research will be assigned equivalent credit hours.

Students failing to complete a thesis after registering for six (6) credit hours are required to register for thesis continuation each semester following until the thesis is approved.

**THE COMPREHENSIVE EXAMINATION**

A comprehensive written and/or oral examination, as decided by the student’s major department in consultation with the student, is required of all graduate students in partial fulfillment of the requirements for the graduate degree. The deadline dates, by which all comprehensive examinations are to be given for each academic term, are indicated in the academic calendar at the front of this Catalog. A candidate is eligible to take the comprehensive examination when he
MADISON COLLEGE

has: (1) been admitted to candidacy; and (2) either completed the required course work or is currently registered in work which, when successfully completed, will fulfill the degree requirements. A comprehensive examination involving a major-minor program cannot be taken until at least six semester credit hours of the minor program have been completed; about one-third of the examination will be devoted to the minor field.

The purpose of the comprehensive examination is to clarify and to appraise the extent of the student's knowledge in the field(s) of his program as a whole. Therefore, it should incorporate the following features: (1) be of appropriate depth; (2) be of a broad nature, not just a re-testing of the student's course work; and (3) if professionally pertinent, be relative to the application of his degree work to his career.

For written comprehensive examinations, departments offering graduate programs will work out arrangements by which questions are developed, distributed, administered and graded by them for a major and/or major-minor program.

If an oral examination is to be given, the major adviser will arrange for a suitable date and location for the examination. A minimum of two members of the Graduate Faculty in addition to the major and minor advisers shall be recommended by him to his Department Head and the Dean of the Graduate School for the purpose of conducting the examination. The oral comprehensive examination will be open to all members of the Graduate Faculty.

In the event that the comprehensive examination is failed, a student may request a reexamination to be administered within six (6) months of the date of failure. Only one reexamination will be allowed.

TIME LIMIT

A graduate student must complete all requirements for the degree within six (6) years from the time he begins his graduate study. A student may, however, submit a petition to the Dean of the Graduate School to receive an extension of time because of extenuating circumstances.
APPLICATION FOR GRADUATION

When a student expects to graduate, he must file an Official Degree Application with the Graduate Office. This card must be completed within the first two weeks of the term in which graduation is anticipated.

A diploma fee of $10.00 is required of all master’s degree candidates. This fee is payable to Madison College at the Treasurer’s Office. (The Official Degree Application is valid only if stamped by the College Treasurer, denoting payment of the diploma fee.)

CREDIT BY TRANSFER

Course credits not exceeding nine (9) semester hours obtained from an accredited college or university may be applied to the major requirements and three (3) semester hours to the minor requirements for a graduate degree at Madison College. Such transfer credits may be considered for inclusion in a student's program of study upon recommendation of the major adviser and, when appropriate, the minor adviser, and approval by the Dean of the Graduate School.

No transfer credit will be allowed for courses taken at the graduate level if such credits have been previously used toward another degree. No transfer credit will be approved while a student is in Non-Degree status.

Students enrolled in a graduate program may take courses at other institutions of higher learning for graduate credit at Madison College only if prior approval is obtained from the major adviser and the Dean of the Graduate School.

No credit toward the graduate degree will be allowed for courses taken by correspondence study.

Off-campus courses are usually offered to part-time students not in residence on the Madison College campus. Credit for such courses may be allowed toward the graduate degree provided the course is taught by a member of the graduate faculty of the institution, and the course has the prior approval of the student’s adviser and the Dean of the
Graduate School. Only six hours of 501 workshop courses may be applied to a degree program.

**GRADING SYSTEM**

The following grades are given in graduate courses solely on the basis of scholarly achievement: A = Excellent; B+ = Good; B = Satisfactory; C = Unsatisfactory; I = Incomplete; W = Withdrawal; F = Failure; S = Satisfactory (for thesis only); U = Unsatisfactory (for thesis only). Graduate students must receive a grade of “B” or higher in courses (“S” in thesis) to receive graduate credit applicable to their degree program.

The grade of “I” (Incomplete) may be given in a course when, because of extenuating circumstances, the requirements of the course have not been completed. The incomplete grade in a course must be removed during the following semester, or it will revert to an “F”.

Reference should be made to the calendar in the current Schedule of Classes for deadline dates for the removal of “I” grades.

**WITHDRAWAL FROM COURSES**

Under extenuating circumstances a student may petition the Dean of the Graduate School to withdraw from a course. The Dean, in conference with the course instructor and the student’s major advisor, will act on the request.

A fee of five dollars ($5.00) is required for any adjustment made after the date specified in the college calendar found in the current Schedule of Classes, unless the change is necessitated by circumstances beyond the student’s control and the fee is waived by the Dean of the Graduate School.

The Dean of the Graduate School, the student’s major advisor, and the instructor of the course will determine the grade(s) the student receives when he withdraws from a course or courses using criteria described in the following section on “Withdrawal from Graduate School.”
WITHDRAWAL FROM GRADUATE SCHOOL

A graduate student withdraws from Graduate School when he terminates his enrollment before completing the semester or summer session for which he registered. A student desiring to withdraw must have a conference with the Dean of the Graduate School, and complete the withdrawal request form available in the Graduate School Office, Keezell 108.

The Dean of the Graduate School, approves the request, sets the official withdrawal date, and notifies other college officials of the action. A student who voluntarily withdraws without receiving official approval, will receive a grade of “F” for all courses for which he is enrolled. A student voluntarily withdrawing with official approval will receive a grade of “W” in all courses. A student who withdraws because of extenuating circumstances will also receive a “W” in all courses.

An adjustment in charges will be figured from the official date of withdrawal. No adjustment in charges will be made unless the request for withdrawal is received in the Graduate School Office within thirty (30) days after the last class attendance. Adjustments will not include non-refundable fees or charges.

STUDENT HEALTH

The College Health Center is staffed by College physicians, including a psychiatrist, and registered nurses. Out-patient service, care for minor illnesses, and emergency care for all injuries and illnesses are provided. Health service is available only to full-time students.

ACADEMIC LOADS

A full-time graduate student in a regular semester is one who is carrying nine (9) or more semester hours of credit. Six (6) semester hours of credit is considered a full load for those students serving as a graduate, service or teaching assistant or as a Head Resident. In a summer session full-time study is defined as a minimum load of six (6) semester hours of graduate credit.
Students planning to register for more than twelve semester hours during a regular term or more than nine semester hours during the summer session must obtain prior approval from the Dean of the Graduate School.

EMPLOYMENT

It is recognized that many graduate students depend upon part-time or full-time employment to meet expenses. Though there is no limit to the number of hours an employed student may take, the student and his adviser should realize that his course schedule should take into consideration the demands of his employment.

FOREIGN LANGUAGE

A reading knowledge of a foreign language is required in those departments which so specify.

DEPARTMENTAL REQUIREMENTS

The graduate degree requirements set forth in this publication set the minimum standards acceptable by the Graduate School of Madison College. Each department may have additional regulations approved by the Graduate Academic Review Board which their students are expected to satisfy.

ATTENDANCE AT COMMENCEMENT

Attendance at graduation is expected. If a student is unable to be present for the graduation exercises, he must notify the Director of Records at least twenty-one days before Commencement.
### SUMMARY OF PROCEDURES FOR MASTER'S PROGRAMS

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<td>Diploma Fee</td>
<td>Student</td>
<td>Second week of classes in graduating term</td>
</tr>
<tr>
<td>Application for Graduation</td>
<td>Student</td>
<td>Thirty days prior to commencement</td>
</tr>
<tr>
<td>Comprehensive Examination</td>
<td>Student, Adviser(s)</td>
<td>See calendar in this catalog</td>
</tr>
<tr>
<td>Filing of approved copies of thesis</td>
<td>Student</td>
<td>Fifteen days prior to commencement</td>
</tr>
</tbody>
</table>

### FEES AND EXPENSES

#### GENERAL FEES

General fees are listed in the *Schedule of Classes* published each term or they may be obtained by request from the Office of the Graduate School. All fees and expenses will be due and payable, in full, upon registration.

The General Fee includes the cost of instruction but does not include the cost of books and supplies.

A full-time graduate student in a regular semester is one who is carrying nine (9) or more semester hours of credit or serving as a Service, Graduate or Teaching Assistant or as a Head Resident.
SPECIAL FEES

Thesis Fee: Graduate students will be charged for thesis (course number 700) at the rate of $30.00 per credit hour, plus out-of-state tuition if applicable. A continuance fee of $60.00 per semester is required for thesis work each semester after a student has registered for 6 semester hours of thesis credit.

Auditing: A person who registers as an auditor will pay the same General Fee as one who registers for credit.

Diploma Fee: A fee of $10.00 will be charged for a Master's Diploma. This fee is payable by the second week of classes in graduating semester.

Room, Board and Laundry: These services are currently not available for graduate students.

Parking Fee: A registration and parking fee will be paid by each student who operates a vehicle on campus. The purpose of this fee is to defray the expense of registering vehicles and maintaining parking facilities.

Music Fees: The fees for full-time students will be as follows for private instruction in voice, keyboard, string, wind, and percussion instruments:

<table>
<thead>
<tr>
<th></th>
<th>Fee</th>
<th>Practice</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 lessons per week per semester</td>
<td>55.00</td>
<td>15.00</td>
<td>70.00</td>
</tr>
<tr>
<td>1 lesson per week per semester</td>
<td>33.00</td>
<td>12.00</td>
<td>45.00</td>
</tr>
<tr>
<td>1 to 15 lesson per semester each</td>
<td>2.25</td>
<td>.75</td>
<td>3.00</td>
</tr>
</tbody>
</table>

The number of lessons each student wishes to take will be arranged with instructors at the time of registration. A general fee of $10.00 per semester is charged students who register only for private instruction and are qualified and desire college credits for such course or courses.

The semester fee for part-time students taking private instruction will be $45.00 for one lesson a week and $90.00 for two lessons a week.
Fee for Late Registration: Students are subject to a fee of $5.00 if they do not complete registration at the designated time. The Dean of the Graduate School may allow exceptions because of extenuating circumstances.

Non-Virginia Residents' Fee: Section 23-7 of the Code of Virginia provides that “no person shall be entitled to the admission privileges, or the reduced tuition charges, or any other privileges accorded only to domiciliaries, residents or citizens of Virginia, in the State institutions of higher learning unless such person is and has been domiciled in Virginia for a period of at least one year prior to the commencement of the term, semester or quarter for which any such privilege or reduced tuition charge is sought, provided that the governing boards of such institutions may set up additional requirements for admitting students.”

STUDENTS' DEBTS

NO credit for College work may be given to any student for a diploma, or a teacher's certificate, or for transfer purposes, until all debts to the College, other than student loans, have been paid.

Upon recommendation of the Vice President for Business Affairs and with the approval of the Dean of the Graduate School, students who are deficient in their accounts may be restricted from attending classes until satisfactory arrangements have been made for payment of their past due obligations to the College.

STUDENTS' REFUNDS

When withdrawing from the college, it is necessary to submit a written statement to the Dean of the Graduate School concerning the course(s) affected and the reason for withdrawing. Refunds will be figured from the formal date of withdrawal, which is not necessarily the last date of class attendance. A student is considered to have formally withdrawn from Madison College when the withdrawal has been approved by the Dean of the Graduate School.

Students who formally withdraw from college during a regular semester prior to the fourteenth (14) calendar day after registration will be refunded all fees except a withdrawal fee of $15.00 and the applica-
tion fee. Students who withdraw after the fourteenth (14) calendar day will be refunded in accordance with the refund schedule maintained by the College Treasurer.

Students who withdraw because of illness certified by a physician, or for unavoidable emergency, or extenuating circumstances approved by the Vice President for Business Affairs, will be charged a pro rata share of all fees.

FINANCIAL ASSISTANCE
DIVISION SCHOLARSHIPS

Division Scholarships

Some Virginia public school personnel are eligible to apply in April through their Division Superintendent for possible scholarship aid at $25 a semester hour for study on the campus at Madison College in the Summer Session. The applicant must be under contract for the ensuing school year and must enroll in courses approved first by the Division Superintendent and then by the State Department of Education. Eligible courses include those leading to the baccalaureate degree, to a Collegiate Professional Certificate, toward a required endorsement, or to meet the requirements of the State to qualify for one's assigned position, such as a visiting teacher, principal, guidance counselor, or supervisor.

Requests for additional information and for Worksheets (preliminary application forms with REGULATIONS clearly given) should be directed in late April by the public school teacher to his/her Division Superintendent. Completed Worksheet and two Summer School Applications must be in the Office of the Division Superintendent by May 15 each year. The Superintendent sends to the State Department of Education a Worksheet and one Summer School Application for each eligible teacher.

ASSISTANTSHIPS

Teaching Assistants

A limited number of Teaching Assistantships are available in several departments offering major programs of graduate study. Ap-
Application forms may be obtained from the Office of the Graduate School. Applicants should have over-all undergraduate records approximating “B” or higher. Teaching Assistants will teach six semester hours of course work or instruct an equivalent of six semester hours in a laboratory. Teaching Assistants generally carry a course load of six (6) semester hours of study.

**Graduate Assistants**

A limited number of Graduate Assistantships are available in most of those departments offering major programs of graduate study. Appropriate application forms may be obtained from the Office of the Graduate School. Graduate Assistants are responsible for their tuition fees, room and board expenses. Applicants should have over-all undergraduate records approximating “B” or higher. Graduate Assistants undertake various departmental assignments requiring fifteen (15) hours a week and generally carry a course load of six (6) semester hours of study.

**Service Assistants**

A Service Assistant is assigned to an academic department or to an administrative office. Application forms can be obtained from the Graduate School. Applicants should have an undergraduate grade point average of “B” or higher. Service Assistants are responsible for their tuition, fees, and room and board expenses. Specific duties will vary, but in general a Service Assistant will assist in the administrative duties of the person for whom he works. A Service Assistant will normally carry a course load of six (6) semester hours of study.

**Residence Hall Assistantships**

The Office of Residence Halls offers appointments to the staff for those graduate students who are interested in working in a residence hall setting. Graduate students may be selected as Head Residents or Resident Advisors depending on their training, experience, and interests, and generally carry a course load of six (6) semester hours.

**Head Residents** are assigned the over-all responsibility for a residence hall. The specific responsibilities include: insuring the effective
administration of the hall, providing leadership and guidance for the Resident Advisor staff, advising the members of the Hall Council, and creating the type of environment in the hall which will help the residents to feel secure and which will maximize their opportunities for personal growth.

Applicants for Head Resident positions may be of either sex and may be married or single. Applicants should have had some prior experience in residence hall work or should have worked with students in some other appropriate setting and be able to demonstrate an ability to relate well with students.

*Resident Advisors* assist the Head Resident in all phases of hall life. They are specifically responsible for insuring that students in their wing or floor make use of the resources available and for helping them clarify and achieve their goals. Resident Advisors are also responsible for helping their residents to identify their interests and needs and plan experiences and programs designed to capitalize on their interests and meet these needs.

Applicants for Resident Advisor positions may be of either sex but must be single. Applicants must demonstrate an ability to work well with students as well as demonstrate a sensitivity for student needs and a willingness to assist students in their development.

**FELLOWSHIPS**

A limited number of Graduate Fellowships of various amounts are awarded by the College to full-time degree students with financial need. Application forms may be obtained from the Office of the Graduate School. Generally, fellowships are not available to recipients of Graduate Assistantships.

**STATE EDUCATION ASSISTANCE AUTHORITY—GUARANTEED LOANS**

The State Education Assistance Authority is a State agency, organized under an Act of the General Assembly of Virginia in 1960. Its purpose is to help young men and women of Virginia who need to borrow funds in order to obtain a higher education.
The Authority, through participation agreements with lending institutions of the State, enables these institutions to make long term personal loans to students to help pay their college expenses.

**Eligibility**

Any person who (1) is a resident of Virginia, and (2) is accepted for enrollment or is a full-time degree-seeking student in good standing at an institution of higher learning in Virginia is eligible. There are no restrictions as to courses or classes. Part-time students are not eligible.

**Application Procedure**

(A) Students applying for guaranteed bank loans whose adjusted family income is less than $25,000 automatically qualify for Federal interest benefits on loans totaling up to $5,000 in any academic year without any needs test or recommendation by the educational institution. 

(B) Students whose adjusted family income is $25,000 or greater and who wish to apply for a subsidized loan in any amount, must, as under current procedures, submit to the lender the school’s recommendation based upon a needs analysis.

- **For students who qualify under description “A” above, complete the following before bringing forms to the Graduate School Office:**
  1. Section A—OE 1260
  2. Section A and B, OE 1070 or Section A and Statement of Adjusted Family Income of OE 1154.
  3. Make certain appropriate signatures are affixed.
  4. Bring uncompleted SEAA Form 8 if not using Form 1154.

- **For students who qualify under description “B” above, complete the following before bringing forms to the Graduate School Office:**
  1. Section A—OE 1260
  2. Section A and B—OE 1070 or Section A and Statement of Adjusted Family Income of OE 1154.
  3. Make certain appropriate signatures are affixed.
  4. Graduate and Professional Student Financial Aid Service
  5. Bring uncompleted SEAA Form 8 if not using Form 1154.
If the student elects not to apply for interest benefits, complete the Form 1070 and Part A of Form 1260 anyway. Also, on Line 9, Part B, of the 1260, write “Not applying for interest benefits.”

NOTE: No dependent student can qualify for interest benefits if the family refuses to supply income information. No dependent student can qualify if he does not supply information about his (and spouse’s) income.

- **Note:** Make certain you have completed the Student Affidavit Form, OE 1289. This form should be kept by the lending institution. Do not bring it to the Graduate School Office with the other forms.

**Interest**

Interest accrues at the rate of 7 percent per annum on unpaid balances of principal. If adjusted family income is less than $25,000 or adjusted income is above $25,000 and need is indicated, the United States Government will pay on behalf of the borrower all of the interest which accrues prior to the beginning of the repayment period of the loan. The borrower will assume the entire interest obligation of the loan upon graduation. Adjusted family income will be determined in the manner specified on an United States Government form which will be supplied to the loan applicant by the lending institution (Form OE 1260).

The preceding paragraph relates to interest. As compensation for insurance loans to the extent of 90 percent, the Authority collects a small insurance fee from Lending Institutions at the time each loan is made. These fees are passed on to the borrowers. They amount to approximately ½ percent per annum on unpaid balances for the period of the loan. The fees are due by the borrower at the beginning of the repayment period but may be included in the installment note with interest if the borrower elects such a procedure.

**Recipient**

The loan is made to the student after consultation with the student’s parent or guardian. A student who is under 21 years of age
may apply for an Authority-approved loan. By special law, students 16 or over have full legal capacity to act in their own behalf.

**Limitations**

The proceeds of a loan may be used only for current educational expenses. The amount of each loan will be a matter for decision between the student and the lending institution, but borrowing under the program cannot exceed five thousand dollars ($5,000), exclusive of interest and charges, for any one academic year or its equivalent, or fifteen thousand dollars ($15,000) for all years. A loan application will ordinarily cover a loan for one academic year. For succeeding years the student, if again qualifying, may apply for needed funds.

**Repayment**

Repayments begin on a monthly installment basis nine months after graduation, or after the borrower ceases to be a full-time college student, whichever first occurs. At that time the borrower gives the lending institution an installment note in exchange for his outstanding note or notes. The length of the repayment period and the amount of the monthly repayment requirement depend upon the total amount of the indebtedness. If this exceeds two thousand dollars ($2,000) the period of repayment will not be less than five years.

The borrower may repay all or any part of the principal of a note at any time without penalty and without liability for interest not then accrued.

**NATIONAL DIRECT STUDENT LOAN**

(Formerly National Defense Student Loan)

Graduate students who are enrolled in full-time or part-time study at Madison College and who need financial aid for educational expenses are eligible for National Direct Student Loans. Priority is given to full-time student borrowers.

Graduate students may borrow as much as two thousand five hundred dollars ($2,500) per year to a maximum of ten thousand dollars ($10,000). The repayment period and the interest do not begin until nine months after the student ends his studies. The loans bear
interest at the rate of 3 percent per year which is subject to change and repayment of principal may be extended over a ten-year period, except that the institution may require a repayment of no less than thirty dollars ($30) per month plus interest.

EXIT INTERVIEW: Every student who receives a National Direct Student Loan must participate in an Exit Interview either prior to graduation or withdrawal from the College. It is the responsibility of the student to see the NDSL clerk to set up this interview. The NDSL Clerk is located in the Business Office, Wilson Hall.

Borrowers who teach in designated schools located in areas of primarily low-income families may qualify for cancellation of their entire obligation over a five-year period. Service as a full-time teacher of handicapped children (including mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped or seriously emotionally disturbed) also qualifies for full cancellation over a five-year period. In addition, it is also possible to cancel an entire loan at 15 percent per year if teaching in the “Headstart” program.

Serving in the military under combat conditions qualifies for 12½ percent rate of cancellation up to 50 percent of the loan.

The colleges and universities approve and make the loans and are responsible for collections. Repayment may be deferred up to a total of three years while a borrower is serving in the Armed Forces, with the Peace Corps, or as a Volunteer in Service to America (VISTA). Repayment is deferred for as long as a borrower is enrolled at an institution of higher education and is carrying at least a half-time academic work load.

Application forms may be obtained from the Office of Financial Aid located in Varner House.

Students are required to go by the Cashier’s Office, located in Wilson Hall approximately two weeks after registration to sign their promissory note and receive their National Direct Student Loan Check.

COLLEGE WORK-STUDY PROGRAM

A federally supported program of employment for students, especially those from low income families who need a job to help pay for
college expenses. Eligible students may work up to 15 hours per week while attending classes on a part-time or full-time basis. Priority is given to full-time students. On campus jobs can include work in laboratories, Godwin Hall, the post office, and secretarial positions for faculty and administration. Eligible students who are accepted for enrollment or who are currently enrolled as degree seeking students on at least a half-time basis and who are in good standing may apply for this employment.

The student is paid once a month for the hours worked and checks are dispursed to student employees by the department the student is employed by. Campus employment is NEVER credited to the student's account.

Madison College participates in the VIRGINIA PROGRAM, a plan which allows students to be employed during the summer under the College Work Study Program in Off-Campus jobs working a maximum of 40 hours per week. Students are assigned to qualified organizations or institutions participating in the program. Application forms may be obtained from the Office of Financial Aid during February of each academic year. The Graduate and Professional Students Financial Aid Service (GAPSFAS) is required to be considered for the program.
AREAS OF STUDY AND COURSES

The courses offered in each department of the Graduate School are listed on the pages that follow:

Courses numbered 500 to 599 are graduate courses open to qualified undergraduate and post-baccalaureate students. Courses numbered 600 and above are open to graduate students only.

ART

DR. DILLER, Head of the Department

The Department of Art offers the Master of Arts degree with a major in Art.

Besides the general admission requirements, the prospective graduate student in Art must present evidence of successful completion of at least thirty-six (36) semester hours, or the equivalent, in art, including six (6) semester hours surveying generally the history of Western Art. A portfolio including actual examples, photographs, and/or slides of the student’s work must be submitted to the faculty of the Art Department for examination before action on an application for admission to a master’s degree program takes place.

The Master of Arts degree with a major in Art is designed to provide studio, historical, and theoretical disciplines at an advanced level. The student is expected to concentrate within a general area. Those now available are (1) painting, drawing, and printmaking; (2) sculpture; (3) ceramics; (4) weaving and textiles; (5) jewelry and metalwork; and (6) photography. The minimum requirement for the Master of Arts degree with a major in Art is thirty (30) semester hours of graduate credit in Art including twelve (12) semester hours in one of the areas of concentration, Art 683 (Criticism of Art), and six (6) semester hours in graduate-level courses in Art History. The candidate in a studio concentration must produce an exhibition of his graduate work near the end of the study program, from which at least one work will be retained by the Art Department. The disposition of these works will be determined by the Art Faculty.
Minor: Students planning a program leading to the Master of Education degree may minor in Art with twelve (12) semester hours of graduate credit in Art, including Art 683 (Criticism of Art). Applicants for a graduate minor in art must submit a portfolio of their work to the graduate faculty of the Art Department, meeting the same standards of quality required of art majors.

ART HISTORY AND CRITICISM COURSES

ART 503. Studies in Greek Art.
ART 506. Twentieth-Century Art.
ART 507. Modern Architecture.
ART 683. Criticism of Art.

STUDIO ART COURSES

ART 620. Weaving and Textiles.
ART 621. Weaving and Textiles.
ART 625. Jewelry and Metalwork.
ART 626. Jewelry and Metalwork.
ART 630. Sculpture.
ART 631. Sculpture.
ART 655. Photography.
ART 656. Photography.
ART 670. Ceramics.
ART 671. Ceramics.

SPECIAL ART COURSES

ART 501. Workshops in Art.
ART 508. Internship in Museology.
ART 680. Reading and Research.
ART 700. Thesis.
ART 501. Workshop in Art. 1-3 credits. (Repeatable to 6 credits).

Workshops, accompanied by lecture and discussion periods, selected from such areas as painting, sculpture, printmaking, ceramics, art education, photography, crafts, and art history. In studio workshops 30 contact hours will be required for each credit hour.

ART 503. Studies in Greek Art. 3 credits.

A selection of specialized topics in the arts of ancient Greece. Sculpture, architecture, pottery and other arts of a given period will be studied in depth. Prerequisite: ART 205 or equivalent.

ART 505. Nineteenth-Century Art. 3 credits.

A seminar dealing with important aspects of the art of the Western world during the 19th century.

ART 506. Twentieth-Century Art. 3 credits.

A seminar investigating in depth selected movements and philosophies in art of the 20th century.

ART 507. Modern Architecture. 3 credits.

A study of the architecture of 19th and 20th Century Europe and America.

ART 508. Internship in Museology. 3-6 credits. (Repeatable).

(Crosslisted as History 508).

An internship program which allows the student to study the philosophy and practice of museology and provides an opportunity for individual research and experience in preparation for careers in art museums. Enrollment in this course subject to approval of Art and History Department Heads.

ART 620 A,B,C. Weaving and Textiles. 3 credits. (Repeatable to 9 credits).

Studio projects in fiber arts with emphasis on weaving or methods of textile decoration. Prerequisite: 9 hours undergraduate weaving or permission of instructor.

ART 621 A,B,C. Weaving and Textiles. 3 credits. (Repeatable to 9 credits).
Individual studio projects in fiber arts. A series of progressive problems will be selected by the student in consultation with the instructor. Prerequisite: ART 620 or equivalent.

ART 625 A,B,C. Jewelry and Metalwork. 3 credits. (Repeatable to 9 credits).

Studio projects in jewelry and metalwork with emphasis on techniques, independent work, and craftsmanship. Prerequisite: 9 hours undergraduate metal and jewelry or permission of instructor.

ART 626 A,B,C. Jewelry and Metalwork. 3 credits. (Repeatable to 9 credits).

Individual studio projects in jewelry and metalwork. A series of progressive problems will be selected by the student in consultation with instructor. Prerequisite: ART 625 or equivalent.

ART 630 A,B,C. Sculpture. 3 credits. (Repeatable to 9 credits).

Advanced sculptural projects with choices from a wide range of materials and techniques including welding, casting, carving, construction, and others. Emphasis is on process development and personal creative growth. Prerequisite: 9 hours undergraduate sculpture or permission of instructor.

ART 631 A,B,C. Sculpture. 3 credits. (Repeatable to 9 credits).

Individual problems in sculpture. Prerequisite: ART 630 or equivalent.

ART 655 A,B,C. Photography. 3 credits. (Repeatable to 9 credits).

Studio projects in the photographic arts. Students will be encouraged to explore traditional and alternative methods involving the photographic process. Prerequisite: 9 hours undergraduate photography or permission of the instructor.

ART 656 A,B,C. Photography. 3 credits. (Repeatable to 9 credits).

Individual projects in the photographic arts. A series of progressive problems will be selected by the student in consultation with the instructor. Prerequisite: ART 655 or equivalent.

ART 660 A,B,C. Graphics and Painting. 3 credits. (Repeatable to 9 credits).

Studio projects aimed toward the development of the individual’s expressive means. The student may choose from a wide variety of
media. Prerequisite: 9 hours undergraduate graphics and painting or permission of the instructor.

**ART 661 A,B,C.** Graphics and Painting. 3 credits. (Repeatable to 9 credits).

Individual projects selected by the student in consultation with the instructor. Prerequisite: ART 600 or equivalent.

**ART 670 A,B,C.** Ceramics. 3 credits. (Repeatable to 9 credits).

Studio projects in the techniques and processes of ceramic design, with emphasis on quality as evidenced by technical and formal considerations. Prerequisite: 9 credit hours of undergraduate ceramics or permission of the instructor.

**ART 671 A,B,C.** Ceramics. 3 credits. (Repeatable to 9 credits).

Individual problems, further advancing technical and expressive skills in the ceramic arts. Prerequisite: ART 670 or equivalent.

**ART 680.** Reading and Research. 3 credits.

Directed reading and research in art areas of special concern to the student. Usually the topics will deal with art history, art theory, philosophical aesthetics, or technical problems related to art production. Approval of the Head of the Art Department and the instructor who will direct the research is required.

**ART 683.** Criticism of Art. (Summer Only) 3 credits.

An overview of major art theories, both as philosophy and as style analysis, for the purpose of investigating the functions and practice of art criticism.

**ART 700.** Thesis. 6 credits.
The Department of Biology offers both the Master of Science degree with a major in biology and the Master of Arts in Teaching degree. The graduate programs of the department are directed principally toward three groups of students: (1) those who wish to continue the study of biology as a scholarly pursuit and who later may continue work toward the doctor's degree; (2) those who wish to perform technical work for industry or governmental agencies, and (3) those who desire to teach at the secondary and/or community college levels. Therefore, the objectives of the programs are to update the student's knowledge of subject-matter, to give the student research and thesis writing experience, and to give the future professional teacher an opportunity to learn techniques of value for actual classroom experiences.

The minimum requirement for the Master of Science degree is thirty (30) semester hours of graduate credit in biology including no more than six (6) semester hours of Biology 700 (Thesis). At least 15 hours must be taken at the 600 and 700 levels, including Thesis. Biology 506, Research Publication Methods, is required for the M.S. degree. The minimum requirement for the Master of Arts in Teaching degree is twenty-one (21) semester hours of graduate credit in biology or eighteen (18) semester hours in biology and three (3) semester hours in a related discipline. In addition, twelve (12) semester hours in professional education are required. (See requirements under Department of Secondary Education and School Administration.) All students electing to major or to minor in biology must have their program of study approved by their Graduate Advisory Committee and the Head of the Department. Graduate students planning a program of study leading to the Master of Education degree may minor in biology with twelve (12) semester hours of graduate credit in biology.

Thesis research toward the Master of Science degree is offered in the following fields: biosystematics, cytology, cytogenetics, developmental biology, ecology, embryology, entomology, genetics, invertebrate zoology, microbiology, molecular biology, mycology, parasitology, plant morphology, physiology (cell, plant and animal), limnology and
algal physiology. Not more than eight (8) hours of graduate study including not more than two (2) courses may be taken in a “non-degree” status and credited toward the Master of Science degree. Accompanying a request for change from “non-degree” to “degree” status the applicant must submit the appropriate credentials of anyone applying for admission to the Master of Science degree program.

Prospective graduate students for either the M.S. or the M.A.T. degree should have completed an undergraduate major consisting of a minimum of thirty-two (32) semester hours in biology, including courses covering the areas of general botany, general zoology, physiology (cell, plant or animal), ecology and genetics. A student may be admitted with deficiencies in one or more of these areas, but should be aware that he may be required by his Graduate Advisory Committee to make up deficiencies for no credit toward his master’s degree. The applicant should have completed a minimum of a year (2 semesters) of general chemistry and a year (2 semesters) of organic chemistry. A course in general physics is strongly recommended, especially for those students interested in physiology or genetics. Submission of scores on the Graduate Record Aptitude Test and the Advanced Test in Biology, as well as three letters of recommendation from individuals who know of the student’s academic potential, are required in the application for admission to the Graduate Program in Biology.

Full-time students majoring in the Department of Biology are required to attend and participate in departmental seminars while in residence.

COURSE OFFERINGS
BIOLOGY

BIO 501. Workshops in Biology. 1-3 credits.
Concentrated study in particular areas of biology. No credit is allowed toward the M.S. degree requirements.

BIO 506. Research Publication Methods. 1 credit.
Bibliographic and graphic methods, including microscopy, photomicrography, scientific drawing and writing, and preparation of manuscripts. For graduate students conducting thesis research. By permission of instructor only.
BIO 515. Parasitology. 4 credits.
A study of the origin and nature of parasitism as illustrated by representative animal parasites. Emphasis is on species of medical and economic importance.

BIO 517. Developmental Biology. 4 credits.
Physiological and biochemical aspects of animal development will be emphasized in lectures. Laboratory periods will be used for experimental work, literature reviews, and discussions. Prerequisites: Molecular Biology; Vertebrate Embryology is recommended.

BIO 525. Medical Entomology. 4 credits.
A study of the arthropods that parasitize man or serve as vectors of human pathogens. Morphological features, distribution, life histories and control methods will be emphasized. Prerequisite: General Entomology.

BIO 535. Insect Ecology. 4 credits.
The environmental relations of insects, including insect development, habits, distribution and abundance. Emphasis is on field studies. Prerequisite: General Entomology.

BIO 540. Public Health Microbiology. 4 credits.
A study of infectious diseases, epidemiology and the interactions of agent and host. The microbiology of water, sewage, air, and foods is covered with respect to the dissemination of disease agents and methods of their control. Prerequisite: General Microbiology.

BIO 545. Cytology. 4 credits.
A study of the organization and components of cells, relating structure to function. Laboratory study will include cytoplasmic organelles as well as nuclear and chromosomal morphology. Prerequisite: Genetics.

BIO 550. Cellular Physiology. 4 credits.
A study of physiochemical relationships as they apply to cell function. Prerequisite: Organic Chemistry.

BIO 551. Ecosystem and Community Dynamics. 4 credits.
Quantitative studies of plant and animal communities and their functional interactions with the environment. The ecosystem will be examined as a dynamic unit comprising both objects and functions. Prerequisite: General Ecology, and consent of Instructor.

BIO 552. Population Ecology. 4 credits.
The structure, distribution and interaction of plant and animal
populations will be examined. Population growth patterns, regulatory mechanisms and differentiation in response to the environment will be considered. Prerequisites: General Ecology, Genetics and consent of Instructor.

**BIO 555.** Plant Physiology. 4 credits.

A treatment of the physiology of higher plant cells and organisms emphasizing biophysical and biochemical aspects of plant functioning. Discussions to include water relations, mineral nutrition, transport phenomena, and metabolism. Prerequisites: A course in physiology and one year of Organic Chemistry, or equivalent.

**BIO 570.** Morphology of Non-Vascular Plants. 4 credits.

Comparative morphology, ecology and taxonomy of representative algae, fungi, and bryophytes.

**BIO 580.** Vertebrate Histology. 4 credits.

A comparative study of the microscopic anatomy of vertebrates. Prerequisites: Comparative Anatomy of Vertebrates or Vertebrate Embryology.

**BIO 610.** Population Genetics. 4 credits.

An introductory study of the genetics of populations as a basis for understanding evolutionary change. Prerequisite: Genetics.

**BIO 616.** Advanced Developmental Biology. 3 credits.

A review of the modern problems of developmental biology with emphasis given to the topics of cytodifferentiation, protein synthesis, enzyme regulation, and the interplay between DNA and RNA. Prerequisite: Developmental Biology.

**BIO 620.** Physiological Genetics. 3 credits.

Gene action in developmental and physiological processes of organisms. Prerequisites: Genetics and Molecular Biology or equivalent.

**BIO 650.** Radiation Biology. 3 credits.

A study of the effect of ionizing radiation on organisms. The nature and source of these radiations will be discussed as well as their effect and methods of protection against them. The experimental nature of the field is stressed through the inclusion of varied laboratory experiments. Prerequisites: A course in physics and/or statistics required or consent of instructor.

**BIO 655.** Plant Growth and Development. 3 credits.

Discussion of the biochemical and biophysical factors involved in plant growth and development. Emphasis will be placed on environmental influences, hormone production and translocation, and the inter-
action of hormones with the plant’s genome controlling morphogenesis. 
*Prerequisite: Plant Physiology or consent of Instructor.*

**BIO 656.** Experimental Plant Ecology. 3 credits.

An advanced level approach to physiological and community plant ecology. Vegetation will be examined as a base for natural ecosystem through its role in energy flow and biogeochemical cycles. The effects of environmental stress and natural limiting factors on plant populations will be considered. *Prerequisite: General Ecology and consent of Instructor.*

**BIO 657.** Experimental Animal Ecology. 4 credits.

The effects of ecological change on animal physiology. The experimental approach to environmental problems will be emphasized in laboratory. *Prerequisites: General Ecology and either Comparative Animal Physiology or Cell Physiology.*

**BIO 660.** Mycology. 4 credits.

An introduction to the structure and form of fungi with consideration of their experimental potential and relationships to human affairs.

**BIO 670.** Developmental Anatomy of Seed Plants. 4 credits.

A study of the origin, growth, differentiation, and maturation of cells, tissues, and organs and their interrelationships. Emphasis is placed on economically important structures of crop, ornamental, and forest plants.

**BIO 675.** Aquatic Ecology. (Summer) 4 credits.

A study of the life of the fresh-water environment. Emphasis on methods for the examination of effects of physical and chemical factors on aquatic organisms and interpretive procedures of assaying results of aquatic investigations. *Prerequisite: Consent of Instructor.*

**BIO 685.** Systematics of Vascular Plants. 3 credits.

A study of the classification systems beginning with the systems of the Greeks and continuing through the phylogenetic systems of the present, emphasizing pre- and post-Darwinian concepts. Identification and nomenclature of the native flora of the State is emphasized. Problematic areas such as the species concept are included.

**BIO 695.** Independent Study. 3 credits.

Individual research in biological problems. Open to M.A.T. students only.

**BIO 700.** Thesis. 6 credits.

Thesis research to be directed by the Graduate Advisory Committee. *Prerequisite: Unconditional admission status in the graduate program.*
BUSINESS ADMINISTRATION

DR. RAMSEY, Coordinator

The Departments of Accounting and Finance, Economics, and Management and Marketing offer a program leading to a Master of Business Administration degree, and graduate courses designed to supplement and broaden knowledge in business and economics for Masters candidates in other fields.

Master of Business Administration (33-48 credits)

The primary purpose of the Master of Business Administration program is to promote the self-development of managers in business, industry and government. Admissions criteria and degree requirements are the same for full-time, part-time, day and evening students. The full-time student may expect to complete the degree in 12 to 18 months.

The Graduate Management Admission Test (GMAT) is required of all applicants for the MBA. This instrument measures aptitudes important to the study of business, and should be taken prior to or during the 1st semester of study. This test was formerly known as the Admission Test for Graduate Study in Business (ATGSB).

MBA requirements are in two phases. Applicants may be exempted from any or all of the five Phase I courses through appropriate undergraduate preparation in business and economics, or by exemption tests.

<table>
<thead>
<tr>
<th>Semester Hours</th>
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<tr>
<td>15</td>
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</table>

**Phase I**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ECON 524</td>
<td>Economic Analysis</td>
</tr>
<tr>
<td>MGT 506</td>
<td>Quantitative Analysis, I</td>
</tr>
<tr>
<td>ACTG 515</td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>MGT 531</td>
<td>Management Systems</td>
</tr>
<tr>
<td>MKTG 574</td>
<td>Marketing Analysis</td>
</tr>
</tbody>
</table>
No Phase I course may be used as an elective in Phase II.

**Phase II**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ECON 624</td>
<td>Managerial Economics</td>
</tr>
<tr>
<td>MGT 602</td>
<td>Quantitative Analysis, II</td>
</tr>
<tr>
<td>MGT 605</td>
<td>Operations Analysis</td>
</tr>
<tr>
<td>MGT 645</td>
<td>Organizational Theory</td>
</tr>
<tr>
<td>FIN 655</td>
<td>Corporation Finance</td>
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<tr>
<td>ACTG 673</td>
<td>Managerial Accounting</td>
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<tr>
<td>MKTG 674</td>
<td>Marketing Management</td>
</tr>
<tr>
<td>MGT 690</td>
<td>Business Policy</td>
</tr>
</tbody>
</table>

Nine (9) additional credits of business and economics electives (excluding Phase I courses) or six (6) credits thesis and three (3) credits electives. These nine hours of electives may be chosen in a particular field of study (accounting, economics, finance, management, or marketing) and thereby achieve a concentration in this field.

**COURSE OFFERINGS**

**ACCOUNTING**

**ACTG 505.** Fundamentals of Business Law. 3 credits.
Accelerated study of business law principles.

**ACTG 515.** Financial Accounting. 3 credits.
Concerned with the overall accounting function from analysis of business transactions and their systematic recording to the interpretation of the resulting financial statements. Not open to undergraduates in business administration.

**ACTG 673.** Managerial Accounting. 3 credits.
Designed to present use of accounting in business decision-making. Covers concepts and theories pertinent to the management function. **Prerequisite:** ACTG 515 or equivalent.

**ACTG 675.** Accounting Theory. 3 credits.
Examination of theoretical and conceptual foundations of account-
ing, together with consideration of the relevant postulates, assumptions, and standards underlying the accounting discipline. Prerequisite: ACTG 673 or Consent of Instructor.

**ACTG 676.** Seminar in Controllership. 3 credits.

The study of the nature and scope of the controllership function of the chief accounting officer of public and private organizations, with emphasis on the development of organizational policies and the measurement of performance. Prerequisite: ACTG 673 or Consent of Instructor.

**ACTG 677.** Advanced Auditing Theory and Practice. 3 credits.

The study of generally accepted auditing standards and theory supporting them. Application of auditing techniques, including statistical sampling. Legal liability of the auditor, role of the auditor in securities regulation, and auditing in a computerized environment. Prerequisite: ACTG 673 or Consent of Instructor.

**ACTG 680.** Readings and Research. 3 credits.

Opportunity is offered the student for individualized directed study in accounting. Prerequisite: Consent of Instructor.

**ACTG 692.** Federal Taxation and Business Planning. 3 credits.

Analysis of federal taxation of business enterprises. Consideration of organizations, acquisitions, mergers, spinoffs, and other divestitures, from the viewpoints of profit planning, cash flow, and tax deferment. Emphasis on corporate taxation. Lecture, discussion and library research. Prerequisite: ACTG 673.

**ACTG 693.** Corporate Financial Reporting. 3 credits.

The study of corporate reporting practices and principles, including pronouncements of Financial Accounting Standards Board, and those of the Securities and Exchange Commission and other influencing agencies. To include analysis and interpretation of corporate financial reports. Prerequisites: ACTG 673.

**ACTG 694.** Accounting Systems. 3 credits.

The study of modern concepts for accounting systems. It will include accounting systems design at different levels of complexity and their integration with other information systems. Prerequisites: ACTG 673 or equivalent.

**ACTG 700.** Thesis. 6 credits.

**ECONOMICS**

See listing under Department of Economics.
FINANCE

FIN 617. Financial Markets. 3 credits.
Focusing on the institutions and markets that supply money and capital to business and industry; covers the problems of intermediation and disintermediation in the U.S., regulations of interest rates, flow of money and capital through the economy and the components of investment demand. Prerequisite: ECON 524 or equivalent.

FIN 655. Corporation Finance. 3 credits.
Emphasizes financial planning, management of short-term assets and liabilities, optimum policies and inventories, accounts receivable and cash, capital structure policies, cost of capital, and capital expenditure policies. Prerequisite: ACTG 515 or equivalent.

FIN 656. International Finance. 3 credits.
Analysis of problems involving international business finance. Description of international payments system and financial institutions and application of analytical techniques and procedures for financing investments and business activities abroad.

FIN 658. Real Estate Finance. 3 credits.
Study of the principles of real estate finance, appraisal, valuation, taxation, and the function of insurance and risk management in real estate finance.

FIN 660. Investment Analysis. 3 credits.
Investment theory; development and application of analytical tools in the appraisal and selection of investments.

FIN 680. Readings and Research. 3 credits.
Opportunity is offered the student for individualized directed study in finance. Prerequisite: Consent of Instructor.

FIN 700. Thesis. 6 credits.

MANAGEMENT

MGT 506. Quantitative Analysis I. 3 credits. (Crosslisted as ECON 506)
Probability theory and its applications to decision making in the corporation. Topics covered include frequency and sampling distribution, hypothesis testing, and estimation. Not open to undergraduates in business administration.
MGT 531. Management Systems. 3 credits.

Concepts of business management, decision processes, management functions, and business resources presented in the framework of an integrated systems overview of the firm. Not open to undergraduates in business administration.

MGT 540. Collective Bargaining and Labor Relations. 3 credits.

Emphasizes development and implementation of national labor policy. Organization of labor unions, analysis of bargaining power, bargaining strategy and tactics of unions and management, and the current economic and social impact of organized labor.

MGT 602. Quantitative Analysis II. 3 credits. (Crosslisted as ECON 602)

Statistical decision-making in a managerial environment. Topics include Bayesian decision theory, regression, correlation, and discriminate analysis. Prerequisite: MGT 506 or equivalent.

MGT 605. Operations Analysis. 3 credits.

Models and procedures of operations management. Topics include programming models, network theory, and systems problem solving. Prerequisite: MGT 506 or equivalent.

MGT 630. Group Dynamics. 3 credits.

Course content revolves around the problems which exist in industrial settings, including group interaction, communication, motivation, and organizational structure.

MGT 633. Leadership and Human Relations. 3 credits.

Understanding of leadership styles and techniques including managerial behavior and its effect upon employees. Topics include the study of management by objectives, T-groups, transactional analysis, etc.

MGT 635. Personnel Administration. 3 credits.

Emphasis is placed on selection interviewing, worker managerial crisis interviewing, E.E.O.C., placement procedures, and assessing manager effectiveness.

MGT 640. Planning and Control. 3 credits.

Review and evaluation of the conceptual foundations of the management planning process and the use of management controls. Formulation, evaluation and modification in establishing long and short-term plans. Budgets and other managerial tools used to evaluate performance are emphasized.
MGT 645. Organizational Theory. 3 credits.

A review of organizational theory with a special emphasis on the behavioral sciences and their application in working with and through individuals and groups. Prerequisite: MGT 531 or equivalent.

MGT 680. Readings and Research. 3 credits.

Opportunity is offered the student for individualized directed study in management. Prerequisite: Consent of Instructor.

MGT 690. Business Policy. 3 credits.

Corporate level management functions. Emphasis is upon competence in effective analysis of organizational problems and the formulation and implementation of policies. Prerequisite: Consent of Instructor.

MGT 691. Simulation and Gaming. 3 credits.

Use of computer simulations to integrate business functional areas through decision making; gaming theory and application; simulation languages and application.

MGT 700. Thesis. 6 credits.

MARKETING

MKTG 574. Marketing Analysis. 3 credits.

Analysis, planning and control of the marketing function viewed as an integral part of the total operation of the firm. Includes consumer behavior, pricing, and channels of distribution. Not open to undergraduates in business administration.

MKTG 582. Marketing Research. 3 credits.

Study of the role of research in marketing decision-making, the research process, scientific-method, analysis and interpretation of research findings. Prerequisite: MKTG 574 or equivalent.

MKTG 606. Physical Distribution Management. 3 credits.

Concerned with optimization of the entire system for distributing products through channels from production to the ultimate consumer. Consider transportation, inventory, location choice and communication. Prerequisite: MKTG 574 or equivalent.

MKTG 674. Marketing Management. 3 credits.

Marketing planning, strategy, and policy. Application of analytical tools to contemporary marketing problems. Prerequisite: MKTG 574.
MKTG 684. Marketing Program Development. 3 credits.
Approaches in developing a total marketing program for the firm. Decisions underlying the integration of strategies into an effective system. Prerequisites: MGT 506 and MKTG 574 or equivalent.

MKTG 680. Readings and Research. 3 credits.
Opportunity is offered the student for individualized directed study in marketing. Prerequisite: Consent of Instructor.

MKTG 700. Thesis. 6 credits.
BUSINESS EDUCATION AND OFFICE ADMINISTRATION

DR. DICKERSON, Head of the Department

The graduate program of the Department of Business Education is designed to help the individual student develop competencies he needs to improve his teaching ability, develop personally and professionally, and strengthen his ability to do research.

The Department of Business Education offers a program of study leading to the Master of Science in Education degree with a major in Business Education and a minor in Education. The minimum requirement for the degree is twenty-one (21) semester hours of graduate credit in Business Education and nine (9) semester hours in Education. Students planning a program of study leading to the Master of Education degree may minor in Business Education with a minimum requirement of twelve (12) semester hours of graduate credit in Business Education.

Each student majoring in the department will be assigned an advisory committee composed of three members of the graduate faculty from which a chairman will be selected. The committee will assist the graduate student in preparing a program commensurate with his background and teaching and future educational goals.

COURSE OFFERINGS

BUSINESS EDUCATION AND OFFICE ADMINISTRATION

BEOA 501. In-Service Business Education. 1-3 credits.

A comprehensive workshop or an intensive study in an area of business education relating to current issues and needs. The course can be repeated as the area of emphasis is changed. Maximum of six hours allowed in a degree program.

BEOA 505. Seminar American Business. 3 credits.

A seminar involving a study of the relationship of business education to business and industry to enable the teacher to obtain a better understanding of the free enterprise system. Field trips, consultants, and case studies are essential parts of the course.
BEOA 540. Seminar in Business Data Processing. 3 credits.

An introduction to electronic computer equipment, with emphasis on applications, system design, and introductory programming. Designed for those with limited data processing background. (Not available to those with BEOA 201 or equivalent)

BEOA 550. Vocational Work Experience. 3 credits.

Develops competences in task analysis and the development of curricular and instructional material based on approved work experience and classroom activities.

BEOA 600. Curriculum Construction in Business Education. 3 credits.

Analysis of new curriculum patterns and the development of materials for use in the block-time program in business education.

BEOA 610. Issues and Trends in Vocational Education. 3 credits.

Examines current issues, problems, and trends in Vocational Education. Considers the identification of these areas and the research, legislation, and publications affecting them.

BEOA 620. Advanced Studies in the Skill Business Subjects. 3 credits.

Advanced studies for the improvement of the teaching of Typewriting and Shorthand.

BEOA 630. Advanced Studies in the Basic Business Subjects. 3 credits.

Advanced studies for the improvement of the teaching of General Business, Business Law, Economics, Consumer Business Education, and Accounting.

BEOA 640. Advanced Studies in Business Data Processing. 3 credits.

Designed to develop advanced competencies in programming, system design, and/or system operations. Includes individualized assignments based upon experience and needs of students. Prerequisite: BEOA 540 or equivalent.

BEOA 650. Administration and Supervision of Vocational Education. 3 credits.

Examines current and proposed legislation, program development and structure, and administrative practices in the vocational areas.
**BEOA 660.** Advanced Studies in Teaching Office Systems and Technology. 3 credits:

Develops competencies in teaching the integration and operation of word-processing, reprographic, and calculating equipment.

**BEOA 680.** Reading and Research. 3 credits.

Examination of approved research procedures for business education. Preparation of reports from assigned field problems applied to various research techniques. *Reading and Research* may be done only in the major field of study.

**BEOA 700.** Thesis. 6 credits.
CHEMISTRY

DR. DeGRAFF, Head of the Department

The Chemistry Department does not offer a graduate degree, but provides selected graduate courses designed to supplement and broaden a student's knowledge of the discipline.

COURSE OFFERINGS

CHEMISTRY

CHEM 501. Workshop in Chemistry. (Summer Only) 3 credits.

This course will deal in depth with an area of chemistry that is of topical and current interest. Topics will be selected from active research areas on the basis of their potential impact on society.

CHEM 525. Intermediate Organic Chemistry. 3 credits.

An advanced study of the theory of organic chemistry as applied to chemical reactions and synthetic methods. Such topics as reaction mechanisms, spectroscopy, and stereochemistry will be included. Pre-requisite: One year of organic chemistry.
COMMUNICATION ARTS
DR. McCONKEY, Head of the Department

The Department of Communication Arts offers graduate courses which are designed to supplement the student's knowledge in various areas including: Speech Communication, Theatre, Radio, Television, Film, and Journalism. A program of graduate study is offered which can result in a minor in Communication Arts for those pursuing the Master of Education degree. The minimum requirement for a minor in Communication Arts includes twelve (12) semester hours of graduate studies in the subject areas.

COURSE OFFERINGS

COMMUNICATION ARTS

COMM 500. Seminar in Communication. 3 credits.

Study and research in the broad spectrum of communication arts and sciences. Emphasis is upon integrating the various aspects for application to academic and practical use. Consideration is given to topics relating to drama, public address, broadcasting, and interpersonal communication.

COMM 501A. Teacher's Workshop: Co-Curricular Activities. (Summer Only) 3 credits.

An intensive study of the philosophy, organizations, and administration of speech activities in the high schools. Emphasis on a selected area of concentration; forensics-debate, drama, or broadcasting. Opportunities for practical work with high school students attending the Madison Summer Speech and Drama Workshop. (Formerly SPCH 501.)

COMM 501B. Teacher's Workshop: Television. (Summer Only) 3 credits.

An intensive study of instructional television for secondary teachers. Analysis of current research on the effects of this medium in education. Evaluation of software and hardware. Emphasis on the development of program material for use by the teacher in the classroom.

COMM 501C. Teacher's Workshop: Theatre. (Summer Only) 3 credits.

An intensive study of the elements of play production. Considera-
tion of theatre games, improvisation, movement, drafting, and construction of scenery units. Emphasis on the use of these elements in the preparation of a play for performance.

**COMM 501D.** Teacher's Workshop: Communication. (Summer Only) 3 credits.

An intensive study and analysis of objectives and methodology of developing communication units for use either in English classes or as independent courses. Participants will develop sample content units, based on state-approved texts, which could comprise a sequential communication program for junior and senior high schools.

**COMM 501E.** Teacher's Workshop: Journalism (Summer Only), 3 credits.

An intensive study of the theory and practice of journalism activities for secondary teachers, including problems of advising the school magazine or newspaper. Consideration given to the legal status of high school journalism. Emphasis on the teacher's role in the overall production of a publication.

**COMM 520.** Seminar in Rhetoric and Public Address. 3 credits.

Study and research in the philosophical and historical bases of rhetorical theory. Emphasis is on the process of rhetoric both as a practical art and as a scholarly method. Consideration is given to topics relating to the development and practice of rhetoric and public address.

**COMM 540.** Seminar in Theatre. 3 credits.

Study and research in the aspects of academic and professional theatre. Emphasis is upon research methods in solving practical problems of theatrical production. Consideration is given to topics relating to acting, directing, and technical elements.

**COMM 545.** American Theatre History. 3 credits.

Study and analysis of the American experience as presented in the dramatic literature of the country. Emphasis upon basic American themes. Consideration of those themes as they appear in our poems, novels, biographies, and histories, and ultimately in our plays.

**COMM 548.** Experimental Theatre. 3 credits.

Study of creative and imaginative drama. Emphasis is upon motivating and guiding advanced students to a higher degree of aesthetic appreciation for the theatre. Consideration is given to the relationship of experimental theatre to the traditional theatre.

**COMM 560.** Seminar in Broadcasting Media. 3 credits.

Study and research in the history, organization and mechanics of the various media. Emphasis is upon the social and artistic roles on the
media. Consideration is given to topics relating to methods of assessing the influence and effectiveness of the broadcasting media.

**COMM 580.** Seminar in Journalism. 3 credits.

Study and research in the history, philosophy and function of the newspaper in American Society. Emphasis upon contemporary views of the role of the press.
The Department of Economics offers a minor program in Economics for students in the Master of Education degree program, and offers courses in the Master of Business Administration degree program.

**MINOR IN ECONOMICS**

*Semester Hours*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ECON 524</td>
<td>Economic Analysis</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>(Students who have completed six (6) semester hours of undergraduate economic principles should not take this, but elect another economics course.)</td>
<td></td>
</tr>
<tr>
<td>ECON 620</td>
<td>Macro Economic Theory</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ECON 650</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economics of the Firm</td>
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<tr>
<td></td>
<td>Economics Electives</td>
<td>6-9</td>
</tr>
</tbody>
</table>

In addition, graduate students pursuing the Master of Arts in Education degree with a major in Social Science may concentrate in Economics. A concentration in Economics requires nine (9) semester hours of graduate credit.

**COURSE OFFERINGS**

**ECONOMICS**

**ECON 501.** Workshop in Economics. 1-6 credits.

Provides detailed study of economics topics. Designed primarily for elementary and secondary teachers.

**ECON 506.** Quantitative Analysis I. 3 credits. (Crosslisted as MGT 506)
ECON 524. Economic Analysis. 3 credits.
Analysis and synthesis of micro and macro economic concepts. Not open to undergraduates in Business Administration.

ECON 602. Quantitative Analysis II. 3 credits. (Crosslisted as MGT 602)

ECON 611. Economic Principles and Issues. 3 credits.
Nontechnical treatment of problems and issues relating to inflation, employment and economic growth. (Formerly ECON 601)

ECON 612. Economic Problems and Issues. 3 credits.
Nontechnical treatment of problems and issues relating to population growth, urban development and environmental quality. (Formerly ECON 602)

ECON 613. Economic Policy and Issue. 3 credits.
Nontechnical study of the role of the United States in the world economy; covers international trade issues and the problems of underdeveloped countries. (Formerly ECON 603)

ECON 620. Macro Theory and Economic Policy. 3 credits.
A study of national economic policy as it relates to unemployment, inflation, and the rate of economic growth. Prerequisite: ECON 524 or equivalent.

ECON 624. Managerial Economics. 3 credits.
Analysis of economic forces affecting business management. Includes economic considerations in managerial control, forecasting, and decision-making. Prerequisite: ECON 524 or equivalent.

ECON 650. Economics of the Firm. 3 credits.
Theories of demand, production and price determination with special emphasis on theory of the firm. Prerequisite: ECON 524 or equivalent.

ECON 651. Economics Seminar: Market Organization and Structure. 3 credits.
An exploration of the relationship of market organization and structure to the efficiency of the production and marketing processes. Alternative market structures will be examined with particular emphasis on the effectiveness of competition. Prerequisite: Consent of Instructor.

ECON 656. International Finance. 3 credits. (Cross-listed as FIN 656)
ECON 675. Seminar in Wages and Employment. 3 credits.

An advanced course in the analysis of national labor markets and related public policy issues. Emphasis on the economic effects of technological change and inflation. **Prerequisite: Consent of Instructor.**

ECON 680. Reading and Research. 3 credits.

Opportunity is offered the student for individualized directed study in economics. **Prerequisite: Consent of Instructor.**

ECON 700. Thesis. 6 credits.
The Department of Elementary and Early Childhood Education offers programs in Early Childhood Education, Elementary Education, and Reading Education which lead to the *Master of Education* degree. All degree candidates majoring in the Department are expected to meet requirements for the Collegiate Professional Certificate with endorsement to teach in the major area prior to receiving the degree. The Department offers a minor in Elementary Education for students who are meeting requirements for the *Master of Science in Education* or the *Master of Arts in Education* degrees. Also, a minor program in Education of the Gifted is provided.

Students, regardless of classification, must have completed at least nine (9) hours of course work in undergraduate professional education before enrolling in graduate courses in Elementary and Early Childhood Education. Generally, the nine hours should have included study in educational or developmental psychology, curriculum, and methods of teaching. Exceptions to all departmental requirements must be approved in writing by the Head of the Department and by the Dean of the School of Education.

### MAJOR IN EARLY CHILDHOOD EDUCATION

This program is designed for students who desire additional preparation for work with young children in nursery schools, public schools, and comprehensive child development centers.

<table>
<thead>
<tr>
<th>Semester Hours</th>
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<tbody>
<tr>
<td>Minimum Requirements</td>
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<tr>
<td>30</td>
</tr>
<tr>
<td>A. Required Courses</td>
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<tr>
<td>18</td>
</tr>
<tr>
<td>ELED 600 Analysis of Research in Elementary Education</td>
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</tbody>
</table>
ECED 610 Curriculum Planning in Early Childhood Education

or ELED 609 The Elementary School Curriculum

ECED 612 Trends and Issues in Early Childhood Education

PSYC 614 Advanced Laboratory Study of the Young Child

ECED 616 Practicum in Early Childhood Education

ECED 619 Seminar in Early Childhood Education

B. Two courses from the following 6

ECED 508 Observation and Study of the Young Child

ECED 509 Curriculum for Early Childhood

ECED 510 Creative Arts in Early Childhood Education

ECED 541 Work with Parents of Young Children

ECED 542 Comprehensive Child Development Centers

ECED 585 Administration and Supervision of Early Childhood Education Program

PSYC 648 Research in Human Development

C. Electives 6

Selected from the graduate offering of the College with approval of the adviser.
MAJOR IN ELEMENTARY EDUCATION

Students who seek admission to these programs but have inadequate backgrounds in elementary education may be required to complete additional course work.

Though a minor is not required, students majoring in Elementary Education may elect a minor.

**Semester Hours**

Minimum Requirements 30

A. Required Courses 18

- ELED 600 Analysis of Research in Elementary Education
- ELED 609 Elementary School Curriculum
- ELED 567 Instructional Theory
- ELED 656 Seminar in Elementary Education

One of the following

- ELED 622 Evaluation in Elementary Education
- PSYC 626 Growth and Development During the Elementary Years
- PSYC 648 Research in Human Development

One of the following

- EDUC 505 Role of School in Society
- EDUC 603 Philosophy of Education

B. Electives 12

Courses included as electives must be selected to develop the professional needs and interests of the student. All electives must be approved by the major adviser and may be drawn from the graduate offerings of the College.
MINOR IN ELEMENTARY EDUCATION

The minor program is designed for subject area specialists who desire additional study in elementary education.

Semester Hours

Minimum Requirements 9

A. Required 6
   ELED 609 The Elementary School Curriculum
   PSYC 626 Growth and Development During the Elementary Years

B. Elective in ELED 3

MAJOR IN READING EDUCATION

State and national standards for the professional preparation of reading specialists are met by this program. Students with inadequate backgrounds in reading education may be required to complete additional course work.

Semester Hours

Minimum Requirements 30

A. Required Courses 21
   READ 580 Foundations of Reading
   READ 658 Diagnostic and Remedial Techniques in Reading
   READ 660 Practicum in Diagnostic and Remedial Techniques in Reading
   READ 665 Organization, Administration, and Supervision of the Reading Program

One of the following:
   ELED 502 The Elementary School Reading Program,
   or
   ELED 506 High School and Adult Reading Programs
One of the following:

ELED 600 Analysis of Research in Elementary Education
or
EDUC 630 Research Methods in Education

One of the following:

ELED 609 Elementary School Curriculum
or
SEED 607 Secondary School Curriculum and Co-Curriculum

B. Electives 9

Electives must be selected with approval of the advisor. (Electives should be selected from the following to insure meeting State Reading Specialists Certification requirements.)

PSYC 670 Group Psychological Tests
ELED 622 Evaluation in Elementary Education
EDUC 625 Evaluation in Education
PSYC 626 Growth and Development During the Elementary Years
PSYC 628 Advanced Adolescent Psychology
ELED 501 Workshop in Elementary Education
READ 515 Corrective Reading for Classroom Teachers
ELED 680 Reading and Research
COED 530 Counseling in Elementary Education
SPED 605 Characteristics of Children With Learning Disabilities
PSYC 675 Individual Intelligence Testing
SPED 630 Advanced Study of the Exceptional Child
MINOR IN EDUCATION OF THE GIFTED

This minor program is designed for students who desire concentrated study of educational programs for gifted children in the elementary school.

**Semester Hours**

Minimum Requirements 12

A. Required Courses 9
   - PSYC 629 Psychology of the Gifted
   - ELED 560 Teaching the Gifted in the Elementary School
   - SPED 520 Field Experience in Teaching the Gifted

B. Elective 3

**COURSE OFFERINGS**

**EARLY CHILDHOOD EDUCATION**

**ECED 501.** Workshop in Early Childhood Education. 3 credits.

Designed to provide students with workshop experiences related to current needs evident in early childhood programs. The topics considered will be determined by interest and demand. No more than six (6) credit hours earned in workshops in education can be applied to a major program.

**ECED 508.** Observation and Study of the Young Child. 3 credits.

Skills for observing, recording, and interpreting the behavior of the young child as a basis for adult intervention and guidance are developed in a laboratory setting. Prerequisite: Six semester hours of Psychology.

**ECED 509.** Curriculum for Early Childhood Education. 3 credits.

Theory and practice in the design and implementation of appropriate curriculum activities for kindergarten and nursery school children. Development through play is emphasized and the areas of science,
social studies, and mathematics are considered. Prerequisite: ECED 508 or equivalent.

**ECED 510.** The Creative Arts in Early Childhood Education. 3 credits.

Application of knowledge and theory of creativity to educational programs for young children. Learning activities in the areas of art, music, creative use of literature and development of creative language, movement and dance will be considered. Prerequisite: ECED 508 or equivalent.

**ECED 511.** Survey of Early Childhood Education. 3 credits.

An overview of educational programs for young children, including nursery, kindergarten and day care programs. Principles underlying these programs are examined in relationship to facilities and equipment, curriculum development, and the role of the teacher.

**ECED 520.** Education for Parenthood. 3 credits.

Study of the role and responsibility of parents in the development of the child. The ability to apply child development principles to day-to-day child rearing practices is emphasized. Resources for supporting parents in their roles are considered.

**ECED 541.** Working with Parents of Young Children. 3 credits.

Study of the role of the teacher in relating to and working with parents. Methods of involving parents, providing for effective communication and parent education are emphasized. Consideration is given to research findings and to evaluation of resources. Prerequisites: ECED 385, ECED 406 or equivalent.

**ECED 542.** Comprehensive Child Development Centers. 3 credits.

A study of comprehensive child development and nursery school programs, young children's needs in group care, program development and utilization of paraprofessional and volunteer staff. Prerequisites: ECED 385, ECED 406 or equivalent.

**ECED 585.** Administration and Supervision in Early Childhood Education. 3 credits.

The role of the administrator in facility planning, budgeting, staff development and personnel supervision in programs for young children. Prerequisite: Permission of the instructor.

**ECED 610.** Curriculum Planning in Early Childhood Education. 3 credits.
Emphasis is given to the application of multiple curriculum foci to the development of programs in early childhood education. Prerequisite: ECED 508, ECED 509 or equivalent.

ECED 612. Trends and Issues in Early Childhood Education. 3 credits.

An in-depth study of contemporary early childhood education programs with emphasis on historical perspective, current research and on programs related to the educationally deprived. Prerequisite: ECEd 610 or ELED 609.

ECED 616. Practicum in Early Childhood Education. (Summers) 3 credits.

Classroom experience with preschool children. Emphasis on planning and executing creative learning activities based on observation and study of young children. A minimum of ten hours per week in classroom involvement is required in addition to seminar meetings. Prerequisite: ECED 610 or ELED 609.

ECED 619. Seminar in Early Childhood Education. 3 credits.

In-depth consideration of research related to early childhood development and education. Prerequisites: ELED 600 and ECED 612.

ECED 680. Reading and Research. 3 credits.

Directed reading and research in areas of student special interest. Reading and Research may be done only in the major field of study. Prerequisites: ELED 600 or equivalent, and written permission of the adviser and department head.

ECED 700. Thesis. 6 credits.

ELEMENTARY EDUCATION

ELED 501. Workshop in Elementary Education. 3 credits.

Designed to provide students with workshop experiences related to current needs evident in elementary education. The topics considered will be determined by interest and demand. No more than six (6) credit hours earned in workshops in education can be applied to a major program.

ELED 525. Teaching the Language Arts in the Elementary School. 3 credits.

Considers the principles and teaching techniques essential to effective language arts instruction in the elementary school. Attention is
given to research findings and to innovative practices. (*For experienced teachers.*)

**ELED 530.** Teaching Mathematics in the Elementary School. 3 credits.

Provides opportunities for individual and group study of content, methodology, and instructional materials necessary to the design and implementation of instructional programs in modern mathematics. (*For experienced teachers.*)

**ELED 531.** Diagnosis and Remediation in Mathematics. 3 credits.

Develops competency in the diagnosis and remediation of pupil learning difficulties in mathematics. *Prerequisites: ELED 358 or ELED 530 or equivalent.*

**ELED 535.** Teaching the Social Studies in the Elementary School. 3 credits.

Gives attention to the role of the social studies in the elementary school curriculum. Procedures for integrating content from the various social sciences are considered in relation to children at various stages of development.

**ELED 551.** Career Education and the Elementary Curriculum. 3 credits.

Designed to provide the preservice and inservice teacher with basic understanding of the essential aspects of career education in the elementary school curriculum.

**ELED 560.** Teaching the Gifted in the Elementary School. 3 credits.

Principles which guide the differentiation of instruction for gifted children are studied. Specific attention is given to techniques for meeting the needs of gifted children in the elementary school classroom.

**ELED 567.** Instructional Theory. 3 credits.

Instructional theory and related research is considered in relationship to instructional objectives, teaching procedures, and pupil evaluation.

**ELED 609.** The Elementary School Curriculum. 3 credits.

A study of the current practices and alternatives in curriculum development for the elementary school.

**ELED 620.** Internship in Elementary Education. 3-6 credits.

The student and college supervisor identify objectives for profes-
sional development and implement procedures to achieve desired outcomes. One-hundred-eighty clock hours of classroom activities for each 3 semester hours earned are required. Maximum of 6 credits may be awarded in a given semester and no more than 6 credits to be applied to degree requirements. (Open to students in degree programs who are fully endorsed in teaching area.)

**ELED 656.** Seminar in Elementary Education. 3 credits.

An intensive study of selected problems in elementary education. Research findings are reviewed and educational theory is explored. **Prerequisite: ELED 609 or permission of the instructor.**

**ELED 680.** Reading and Research. 3 credits.

Directed reading and research in areas of special student interest. Reading and Research may be done only in the major field of study. **Prerequisites: ELED 600 or equivalent, and written permission of the adviser and department head.**

**ELED 700.** Thesis. 6 credits.

**READING EDUCATION**

**READ 501.** Workshop in Reading. 3 credits.

Designed to provide students with workshop experiences related to current needs evident in reading. The topics considered will be determined by interest and demand. No more than six (6) credit hours earned in workshops in education can be applied to a major program.

**READ 502.** The Elementary School Reading Program. 3 credits.

A study of the developmental reading program, recreational reading, various approaches and materials in reading and reading in the content areas. **Prerequisite: READ 359 or equivalent.**

**READ 506.** High School and Adult Reading Programs. 3 credits.

A survey of basic reading skills, special reading skills, reading rate, evaluation, classroom organization and reading in the subject matter fields. **Prerequisite: READ 359 or READ 502 or equivalent.**

**READ 515.** Corrective Reading for Classroom Teachers. 3 credits.

Skills and understanding necessary to correct reading problems within the classroom. Informal and group diagnostic techniques, corrective teaching methods and materials and organizing the classroom for corrective instruction. **Prerequisite: Course in developmental reading. (This course may not be substituted for READ 658 or READ 660 in the Reading Specialist Program.)**
READ 580. Foundations of Reading. 3 credits.

The historical, psychological, physiological, sociological and psycholinguistic factors which influence the development of reading proficiency are considered.

READ 658. Diagnostic and Remedial Techniques in Reading. 3 credits.

Major emphasis is given to the diagnosis of reading disabilities and the development of prescriptive remediation programs. Prerequisite: READ 502 or equivalent.

READ 660. Practicum in Diagnostic and Remedial Techniques in Reading. (Summers) 3 credits.

Students diagnose the reading needs of individuals. Remedial reading programs are prescribed and implemented. Prerequisite: READ 502 or READ 506 and READ 658.

READ 665. Organization, Administration and Supervision of the Reading Program. (Summer) 3 credits.

The development, administration and supervision of the elementary and secondary reading programs are studied. The roles of the reading specialist, special reading teacher, administrator and supervisor are explored in relationship to the reading program.

READ 680. Reading and Research. 3 credits.

Directed reading and research in areas of special student interest. Reading and Research may be done only in the major field of study. Prerequisite: EDUC 630 or ELED 600 or equivalent, and written permission of the adviser and department head.

READ 700. Thesis. 6 credits.
ENGLISH

DR. HAWTHORNE, Head of the Department

The Department of English offers both the Master of Arts degree with a major in English and the Master of Arts in Teaching degree in English.

The minimum requirement for the Master of Arts degree is thirty (30) hours of graduate credit in English. A student may fulfill six (6) of his required hours in English by writing a thesis. Completion of the third year of a college foreign language course or passage of a reading examination in a foreign language is also a requirement for the Master of Arts degree.

The minimum requirement for the Master of Arts in Teaching degree in English is twenty-one (21) hours of graduate credit in English or fifteen (15) semester hours in English and up to six (6) semester hours in a related discipline selected with the approval of the major adviser. In addition, twelve (12) semester hours in professional education are required.

All students are required to take English 618 (Bibliography and Methods of Research) and to pass a comprehensive examination. A student must plan a program of study with his English adviser before registering for graduate courses in English.

The minimum requirement for a Master of Education degree with a minor in English is twelve (12) hours of graduate credit in English.

Students are urged to submit scores for the Graduate Record Examination Aptitude Test and the Advanced Test in Literature in English as part of their application to graduate school. When this is not possible, a student must take these tests the first time they are given after his application for graduate work has been accepted.

COURSE OFFERINGS

ENGLISH

ENG 505. Growth and Structure of the English Language. 3 credits.
History of the English language with attention to the changing forms of speech as reflected in morphology, phonology, syntax, and semantics.

**ENG 510.** Special Authors Seminar. 3 credits.
Intensive study of a major English or American author or of a selected group of authors. (May be repeated for credit when course content changes.)

**ENG 512.** Special Topic Seminar. 3 credits.
Study of a literary school, movement, genre, or some other significant literary or linguistic topic. (May be repeated for credit when course content changes.)

**ENG 535.** The History of Literary Criticism. 3 credits.
Survey of the nature, function, and development of literary criticism from Aristotle to Eliot.

**ENG 550.** Modern Drama. 3 credits.
Representative plays of modern and contemporary dramatists.

**ENG 560.** English Literature of the Early Renaissance. 3 credits.
English literature of the early renaissance, with major emphasis on non-dramatic works.

**ENG 572.** Contemporary Approaches to English Linguistics. 3 credits.
Intensive survey of English linguistics and its current applications.

**ENG 590.** Studies in Old English. 3 credits.
The Old English Language with readings in selected poetry and prose of the period.

**ENG 601.** Shakespeare. 3 credits.
Selected plays by Shakespeare.

**ENG 610.** Studies in Middle English. 3 credits.
Study of representative literary works of the Middle English period.

**ENG 618.** Bibliography and Methods of Research. 3 credits.
Introduction to scholarly materials, procedures, and techniques, including scholarly writing. (Work in this course is done in both the classroom and the library.)
ENG 620. Studies in Restoration and Eighteenth-Century Literature. 3 credits.

Major authors of the neo-classical period studied in the context of the cultural and intellectual currents of the time. (In some years Dryden, Swift, and Pope will receive chief attention; in others, Dr. Johnson and his contemporaries.)

ENG 630. Studies in English Literature in the Victorian Period. 3 credits.

The works of several major authors of the period.

ENG 631. Studies in American Romanticism. 3 credits.

Concentrated examination of selected authors, such as Poe, Hawthorne, Emerson, Thoreau, Melville, and Whitman.

ENG 632. Studies in American Realism. 3 credits.

Concentrated examination of such authors as Mark Twain, William Howells, Stephen Crane, and Henry James.

ENG 635. Elizabethan and Jacobean Drama. 3 credits.

Development of English drama from the morality plays to 1642.

ENG 640. Studies in Contemporary Literature. 3 credits.

Poetry or fiction of significant contemporary British and American authors. (Choice of authors studied will vary in different years.)

ENG 660. Studies in Seventeenth-Century Literature. 3 credits.

Selected authors and movements in the literature of the Seventeenth Century.


Study of the pre-Romantics, Wordsworth, Coleridge, Byron, Shelley, Keats, and others. (The choice of authors to be studied may vary in different years.)

ENG 680. Reading and Research. 3 credits.

Supervised reading and research in the literature of his special interest. Reading and research may be done only in the major field of study. Approval must be obtained from the Head of the Department.

ENG 700. Thesis. 6 credits.
GEOLOGY DEPARTMENT

PROFESSOR HARNSBERGER, Head of the Department

The Department of Geology offers graduate courses which are designed to supplement and broaden students' knowledge in this field. A program of graduate study is offered which can apply to a minor in Geology for those pursuing the Master of Education degree with a major in Secondary Education. The minimum requirement for a minor in Geology is twelve (12) semester hours of graduate credit in Geology, including Geology 680 (Reading and Research).

COURSE OFFERINGS

GEOLOGY

GEOL 501. Workshop in Geology. 1-3 credits.
An investigation of laboratory techniques in rock and mineral identification, geologic and topographic map reading and field investigations of crustal structures. This course can be repeated as frequently as the area of emphasis is changed.

GEOL 520. The Earth's Crust and Surface Processes. 3 credits.
The make-up and structure of the earth's crust. A study of the processes which act on the crust and land forms that result. Prerequisite: GEOL 130 or permission of instructor.

GEOL 530. Earth Science for Teachers. 3 credits.
Problems encountered from the presentation of earth science concepts at the secondary school level. Appropriate laboratory, field and classroom experiences are utilized to improve the students' understanding of the earth. Prerequisite: Permission of instructor.

GEOL 535. Paleobiology. 3 credits.
Principles of study; techniques, and problems of dealing with organisms and communities preserved in the fossil record. Independent or group research will be emphasized on one or more of the major fossil taxa. Prerequisite: One year of Biology or Geology.

GEOL 540. Paleoecology. 2 credits.
An introduction to the evolution of the earth's past environments. Methods of study and interpretation of ancient environments. Biological and geological approaches to paleoecology are considered. Prerequisite: GEOL 535.
GEOL 550. Mineral and Energy Resources. 3 credits.

A survey of the earth's mineral and energy resources including distribution and mode of formation. Environmental implications of extraction and use are considered. Prerequisite: GEOL 130 or permission of instructor.

GEOL 680. Reading and Research. 3 credits.

Directed reading in designated areas of specialized interest in Geology. Investigation, research, and reporting carried out under the supervision of a faculty member. Prerequisite: Permission of the Head of the Geology Department and the instructor who will direct the search.
The Department of History offers the Master of Arts degree with a major in History and the Master of Arts in Teaching degree with a major in History.

The program leading to the Master of Arts degree with a major in History offers an opportunity for concentration in four fields of History: United States History Prior to 1877; United States History Since 1877; Early Modern European History (1648-1815); and Modern European History (Since 1815). Admission requirements are: completion of at least twenty-four (24) semester hours of undergraduate credit in History, or their equivalent, with approximately a “B” average or higher; and submission of satisfactory scores on the Graduate Record Aptitude Test and the Advanced Test in History.

Minimum departmental requirements for the Master of Arts degree with a major in History are:

1. Thirty (30) semester hours of graduate credit in History which may include no more than six (6) semester hours in allied Social Science fields.
2. A thesis for six (6) semester hours credit (to be included in the 30-hour requirement), or a Master’s essay in partial satisfaction of the requirements of a selected 600-level course.
3. A grade of “C” or above in a third-year college course in modern foreign language, or successful completion of French 205-206 or German 205-206, or successful completion of a reading examination in one foreign language.
4. Successful completion of an oral comprehensive examination in one of the four fields of concentration offered by the History Department.
5. At least six (6) semester hours of course work outside the field of concentration.

Admission requirements for the program leading to the Master of
Arts in Teaching degree with a major in History are: completion of at least twenty-four (24) semester hours of undergraduate credit in History or equivalent, with approximately a “B” average or higher; and submission of satisfactory scores on the Graduate Record Aptitude Test.

Minimum requirements for the Master of Arts in Teaching degree with a major in History are: twenty-one (21) semester hours of graduate credit in History, which may include History 700 (Thesis), or fifteen (15) semester hours of graduate credit in History and six (6) semester hours of graduate credit in approved courses in Social Science (Economics, Geography, Political Science, and Sociology). In addition, twelve (12) semester hours of graduate credit in professional education are required.

The minor in History in the Master of Education degree requires twelve (12) semester hours of graduate credit in History.

Prerequisites for enrolling in graduate courses in History are: HIST 233-234, United States History, or equivalent, for courses in United States or Latin American History; and General Studies History, or equivalent, for courses in European, African, or Asian History.

**COURSE OFFERINGS**

**HISTORY**

**HIST 501.** Workshop in History. 1-3 credits.

Intensive study of topics of current interest and demand. Primarily designed for history and social studies teachers. *May be repeated for credit when content is different.*

**HIST 508.** Internship in Museology. 3 credits. (Crosslisted as ART 508)

An internship which allows the student to study the philosophy and practice of museology and provides an opportunity for individual research and experience in preparation for careers in art museums. Enrollment in this course subject to approval of Art and History Department Heads.

**HIST 520.** United States History, 1763-1800. 3 credits.

An interpretive study of the political, economic, social, and cultural history of the United States from the French and Indian War through the Federalist period.
HIST 525. United States History, 1800-1850. 3 credits.
An interpretive study of the political, economic, social, and cultural history of the United States from the election of Jefferson through the Jacksonian era.

HIST 530. United States History, 1877-1919. 3 credits.
An interpretive study of United States history from Reconstruction through World War I. Special attention is given to the nation's emergence as an industrial and urban society and as a world power, and to third party and reform movements of the late 19th and early 20th centuries.

HIST 531. Recent United States History. 3 credits.
An interpretive study of the United States since World War I, emphasizing the changing roles of the national government in domestic affairs and of the United States in its world relations.

HIST 545. Latin America and the United States. 3 credits.
An examination of the diplomatic relations between Latin America and the United States from the era of the Latin American revolutions for independence to the present. Emphasis is placed on the Monroe Doctrine and its extensions, and the development of the Pan-American system.

HIST 546. Mexico, Central America, and the Caribbean. 3 credits.
A regional study of the history of Central American and Caribbean nations with special emphasis given to Mexico from the Revolution of 1910 to the present.

HIST 547. South America. 3 credits.
Historic development of the continent with special attention to selected nations since the early national period of the 19th century.

HIST 559. Modern France. 3 credits.
Topical studies in French history from the fall of Napoleon I to the present.

HIST 562. Modern Germany, 1918-Present. 3 credits.
An advanced study of 20th century Germany. Readings and discussion center around the aftermath of World War I, Weimar Germany, the rise of Nazi Germany, the Third Reich, World War II, and the development of West and East Germany.

HIST 565. Twentieth Century Britain. 3 credits.
An examination of the major themes of British history in the 20th
century, with attention to political, social, economic, diplomatic, and imperial topics from the Pre-World War I decade through the post-World War II decades.

HIST 575. Soviet Russia. 3 credits.
A study of Soviet Russia from the 1917 Revolution to the present. Readings and discussion emphasize significant political, economic, social, and cultural developments.

HIST 578. Eastern Europe. 3 credits.
A study of the lands between Germany and Russia, from the Baltic to the Balkans. Emphasis is on the Hapsburg Empire and its successor states, the origins of the World Wars, the Post-World War II communist governments, and the cultural and intellectual contributions of the Eastern European peoples.

HIST 580. West Africa. 3 credits.
An examination of the sweep of history from neolithic times through 20th century independence movements of that part of Africa from which the blacks of America trace their ancestry. The area includes the basins of Lake Chad and the Senegal, Niger, Gambia, Volta, Sanaga, Ogooue, Congo and Cuanza Rivers. This course is designed especially for those teaching Black History or Black Studies in secondary schools.

HIST 585. Southeast Asia. 3 credits.
A history of mainland Southeast Asia from Burma to Vietnam, Indonesia, and the Philippines, with emphasis on the influences of Indian and Chinese civilization, the impact of European colonial rule, the rise of nationalism, the gaining of independence, and the postwar political developments.

HIST 601. United States Diplomatic History, 1800-1890. 3 credits.
A study of diplomatic activities and foreign relations of the United States in the 19th century, with special attention to the development of principles of foreign policy and the significance of foreign affairs in United States history.

HIST 602. United States Diplomatic History, 1890-1941. 3 credits.
An intensive study of American diplomatic activities and foreign relations from the 1890’s to the eve of World War II, with emphasis on the development of imperialism, isolationism, and disarmament, as well as the diplomacy of the Spanish-American War, World War I, and the Pre-World War II period.
HIST 610. The Era of Franklin D. Roosevelt. 3 credits.

An intensive study of the period 1933-1945 as a dividing line in American economic, social, and political development, with examination of evaluations of FDR and the New Deal. Attention also is given to the emergence of the Grand Alliance of World War II and of Cold War problems.

HIST 620. The New South. 3 credits.

A general survey of the economic, political, religious, cultural, and social development of the Southern region since 1877, with emphasis on the various problems confronting the South in its development.

HIST 624. Colonial America. 3 credits.

An interpretive study of the colonial period of American history to 1763. Special attention is given to social and cultural life, the imperial system, and the political heritage of colonial America.

HIST 625. Europe in the Era of the French Revolution. 3 credits.

A study of vital philosophical, social, and economic aspects of the age of the democratic revolutions. Special attention is given to an interpretive study of the Enlightenment, to the historiography of the French Revolution, and to the career of Napoleon.

HIST 626. Europe in the Age of Louis XIV, 1638-1715. 3 credits.

An examination of the main currents which molded European society in the 17th century, with Louis XIV's France as the focal point. Attention is given to classical France, absolutism and constitutionalism, the impact of science and religion, the crisis of the European mind, and the effects of war and popular revolts.

HIST 627. Tudor-Stuart England. 3 credits.

A study of the economic, intellectual, political, and religious development of the English people from 1485 to 1714, with special attention to the constitutional struggles of the 17th century.

HIST 630. Europe in the Era of World War I. 3 credits.

A study of the First World War as a pivotal event in the history of the modern world with special emphasis on the war's origins and its shattering effect on late 19th century European civilization. Attention is given to the conduct of the war and to the making of the peace settlement.

HIST 640. Europe in the Era of World War II. 3 credits.

A study of the Second World War with emphasis on its origin and
aftermath. Attention is given to such topics as the rise of the totalitarian state, interwar diplomacy, the conduct of the war, and the advent of the Cold War.

**HIST 659.** Political and Social Thought, Ancient to Early Modern Times. 3 credits.

A study of the most significant political and social ideas from ancient Greece through the 18th century. Emphasis is given to such classics as the works of Aristotle, Cicero, St. Augustine, Machiavelli and Montesquieu.

**HIST 660.** Intellectual History of Modern Europe and the United States. 3 credits.

Main currents in European and American thought since the French Revolution. Emphasis is on the crisis of the modern mind as reflected in philosophy, literature, theology, sociology, psychology and political theory.

**HIST 661.** Seminar in Marxist-Leninist Theory. 3 credits.

(Cross listed as POSC 661.)

A study of the most significant ideas concerning politics, society, economics, and philosophy which have shaped Communism and Marxist varieties of Socialism.

**HIST 670.** Twentieth-Century China. 3 credits.

An examination in depth of the main course of the development that led to the final collapse of Imperial China, the abortive experiments in republicanism, the triumph of the communists, and the development of China under Mao Tse-tung.

**HIST 679.** Selected Topics in History. 3 credits.

An in-depth study of a selected topic or theme in history. This course may be repeated for credit when content is different. See Schedule of Classes for current topic.

**HIST 680.** Reading and Research. 3 credits.

Opportunity is offered the individual student for reading and research in an area of history of special interest to him. This course is open only to students majoring in History. Approval must be obtained from the Head of the Department.

**HIST 700.** Thesis. 6 credits.
HOME ECONOMICS

DR. ROWE, Head of the Department

The Department of Home Economics does not offer a graduate major or minor program. Workshops in different areas of Home Economics are made available as student requests indicate a need.

COURSE OFFERINGS

HOME ECONOMICS

HE 501. Workshop in Home Economics. 1-3 credits.

Workshops in different areas of home economics will be studied as student needs indicate. This course is designed expressly for continuing education. It can be repeated as frequently as the area of emphasis is changed.

LIBRARY SCIENCE AND EDUCATIONAL MEDIA

DR. RAMQUIST, Head of the Department

The graduate program in the Department of Library Science and Educational Media leads to the Master of Education degree with a major in School Library Media Services (SLMS). The program is designed to provide advanced education for individual professional preparation in the following three areas:

A Media Specialist I. The basic level of preparation needed to be certified as a School Librarian by the state of Virginia to carry out the operations of a school media center.

B Media Specialist II. A media professional with managerial competencies responsible for managing a large or small single school media center.

C Media Supervisor. A media professional with appropriate certification and advanced managerial administrative and
supervisory competencies who qualifies for a district administrative or supervisory position.

Classroom teachers at the elementary and secondary level seeking admission into the masters programs must first be certified for a professional position in school media centers. This individual must first pursue the Media Specialist I program.

For individuals either in the media profession or who are classroom teachers the department also has a graduate minor in Library Science which is a 12 hour program. Consult with the department about this program.

To be considered as a candidate for the Masters degree an individual must complete certification or be certified at the first level of a media professional (Media Specialist I), apply for graduate school and take the Graduate Record Examination, and appear before a departmental committee for an interview. No advanced test on the GRE is required. Contact the department for further details.

**GRADUATE COURSES FOR FIRST CERTIFICATION (MEDIA SPECIALIST I)**

*Semester Hours*

Minimum Requirements  

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
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<tbody>
<tr>
<td>LSEM 511</td>
<td>Survey of Materials for Children</td>
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<tr>
<td>LSEM 512</td>
<td>Survey of Materials for Adolescents</td>
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<td>LSEM 540</td>
<td>Audiovisual Instruction</td>
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<td>LSEM 580</td>
<td>Internship in School Library Service</td>
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<td>LSEM 340</td>
<td>Information Sources</td>
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<td>LSEM 365</td>
<td>Organization of Materials</td>
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<td>LSEM 366</td>
<td>Administration of School Libraries</td>
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*These courses may be used in the Masters program.*
MAJOR IN SCHOOL LIBRARY MEDIA SERVICES
MEDIA SPECIALIST II

Semester Hours

Minimum Requirements 18

LSEM 510 Collection Development
LSEM 602 Research Methods in Library Science
LSEM 620 Management of Media Services
LSEM 623 Communications Theory in Library Media Systems

one of the following

LSEM 540 Audiovisual instruction
LSEM 542 Production of Instructional Materials
LSEM 641 Mediated Instructional Systems

one of the following

LSEM 610 Humanities Materials
LSEM 612 Science Materials
LSEM 614 Social Science Materials

Electives 12

Chosen in consultation with advisor

MAJOR IN SCHOOL LIBRARY MEDIA SERVICES
MEDIA SUPERVISOR

This program is also a 30 hour master program but to become certified as a supervisor additional course work is needed in supervision and curriculum. Check with the department on requirements for this program.
COURSE OFFERINGS
LIBRARY SCIENCE

LSEM 501. Workshop in Library Science. 1-3 credits.
Concentrated workshops designed for the continuing professional development of school personnel for more effective provision and utilization of school library services and resources. Each workshop will deal with a topic of current concern, with emphasis on practical methods and projects. Prerequisite: Collegiate Professional Certificate or permission of Head of Department.

LSEM 505. Seminar in Media for Teachers. 3 credits.
A seminar, designed specifically for teachers, which involves both the application of recently tested innovative ideas together with the intensive study of media principles, theories and practices. Topics will change from semester to semester and range from visual literacy to the development and use of learning stations in the classroom.

LSEM 510. Collection Development. 3 credits.
Principles and procedures for developing multi-media library collections. Study of reviewing media and bibliographies for print and non-print materials. Developing standards of judgment for selection of materials of quality for depth within subject areas and for breadth of coverage. Prerequisite: Collegiate Professional Certificate or permission of Head of Department.

LSEM 511. Survey of Books for Children. 3 credits.
Comprehensive survey of the reading materials available for children, including current writings and also older works. Study of the research on children's reading interests.

LSEM 512. Survey of Books for Adolescents. 3 credits.
Comprehensive survey of reading materials for secondary school students. Attention to curriculum-related non-fiction, fiction, biography, literary works, and magazines. Study of the research on reading interests.

LSEM 520. Literary Enrichment Activities. 3 credits.
Activities for teachers and librarians for developing the enjoyment of books in elementary and secondary students. Experience in such skills as storytelling, book talks, broadcast programs, creative dramatics and puppetry, and the preparation of annotated book lists. Prerequisite: Collegiate Professional Certificate or permission of Head of Department.

LSEM 525. Literature in the Oral Tradition. 3 credits.
Storytelling studied as a traditional folk art, as a teaching technique, as an art form based on improvisation, and as a medium for
transmitting values, ideas, and ideals. Experience in selecting and adapting, for oral presentation, literary materials primarily from the realm of folklore.

**LSEM 530.** Special Problems in Cataloging. 3 credits.

Instruction and experience in the methods of handling the special problems that arise in the cataloging of printed and non-printed materials in the multi-media library. The course assumes that the student already has a basic knowledge of library cataloging and classification by the Dewey Decimal system. Prerequisite: LS 365 or equivalent, and permission of Head of the Department.

**LSEM 540.** Audio-Visual Instruction. 3 credits.

Examines principles underlying effective use of audio-visual equipment and materials in the teaching-learning process. Students will become familiar with both established and innovative audio-visual materials. The student will produce audio-visual teaching aids appropriate to his own instructional area.

**LSEM 542.** Production of Instructional Materials. 3 credits.

Develops skills in the production of a variety of projected and non-projected materials for classroom use.

**LSEM 550.** Touring Instructional Media. 3 credits.

A summer tour of instructional/school media centers in different geographical locations of the United States. The tour will emphasize current trends in instructional media, physical plan facilities, and administrative structure of services.

**LSEM 580.** Internship in School Library Service. 3 credits.

The internship provides the advanced but inexperienced student with supervised on-the-job training. Cannot be applied to degree requirements. Prerequisite: Must have teaching experience and have completed library science courses required for certification.

**LSEM 602.** Research Methods in Library Science. 3 credits.

General orientation to research methods for librarianship, and systematic study of the research literature of the field. Students should achieve a competency in library research and a clearer understanding of how research enables the profession to move forward. Prerequisites: Nine hours of graduate study in library science.

**LSEM 605.** Seminar in School Library Administration. (Summers) 3 credits.

A seminar for librarians and educators involving consideration of recent innovations and intensive study of current problems in school librarianship. Six credit hours earned in Seminars in School Library
Administration may be applied to the Library Science major. Pre-requisites: Collegiate Professional Certificate and experience in an elementary or secondary school.

LSEM 610. Humanities Materials: Readings and Resources. 3 credits.

Study of important periodicals, bibliographies, and other resources in the fine arts, literature, philosophy, religion, music, and performing arts. Surveys historical development of each discipline. Considers typical information needs in the humanities, applying this study to evaluation of the multi-media resources available for elementary and secondary education.

LSEM 611. Critical History of Children’s Literature. 3 credits.

Children’s books in English from the earliest times. A critical analysis of literary values and a study of the earlier social and cultural forces affecting children’s literature.

LSEM 612. Science Materials: Readings and Resources. 3 credits.

Study of important periodicals, bibliographies, and other resources in the mathematical, physical, biological, and health sciences, including technology. Surveys the historical development of each discipline. Considers typical information needs of the sciences, applying this study to the evaluation of multi-media resources available for elementary and secondary education.

LSEM 614. Social Science Materials: Readings and Resources. 3 credits.

Study of the basic literature and development of the social sciences, and application of this study to the evaluation of the multi-media resources, print and non-print, available for elementary and secondary education.

LSEM 620. Management of Media Services. 3 credits.

Management of media services in the context of the overall educational program, organization and operation of centralized services, communication of purposes of the media programs; program planning and budgeting, staffing, in-service training, and program evaluation.

LSEM 623. Communications Theory in Library Media Systems. 3 credits.

The library as an agency of communication throughout history. Emergence of a broader role for libraries in the totality of human communications, with their increasing attention to dynamic as well as static communications. Growth of school library media services exemplifying this changing role.
LSEM 624. Automation of Library Procedures. 3 credits.

Introduction to the fundamental principles and recent developments in the applications and implications of automation of library media services. The focus of the course is on designing, implementing, utilizing, and evaluating automated procedures in the areas of technical processes, bibliographic control, inventory, and public services.

LSEM 625. Projects in Automation. 3 credits.

A flexible opportunity for automating specific procedures in actual library settings either by an individual or by a team of individuals working collectively on a project of larger scope. Prerequisites: LS 624 and permission of head of department. Also, fundamental knowledge of computer programming by at least one member of project team.

LSEM 641. Mediated Instructional Systems. 3 credits.

Advanced topics and techniques of planning and producing audio-visual instructional materials. Extensive laboratory practice. Prerequisite: LSEM 542.

LSEM 643. Seminar in Instructional Technology. 3 credits.

Study and research of the recent developments in instructional technology. Consideration is given to topics relating to media management, production development and program development. Opportunities will be provided for the student to pursue individual study of research findings or to develop projects related to instructional technology. Prerequisite: Consent of instructor.

LSEM 650. Supervision of District Media Services. 3 credits.

Role and objectives of the supervisory program. System-wide coordination of school library media services and development of quality programs and services. Implications of current educational trends for school media systems. Study of behavior patterns for effective leadership.


Provides a variety of supervised field experiences in school media centers and other media settings. In consultation with instructor activities and location will be chosen for the field experience. Prerequisite: Permission of instructor.

LSEM 680. Reading and Research. 3 credits.

Offers the individual student the opportunity for reading and research under faculty supervision in a school library media area not treated extensively in the regular curriculum but of special interest to the student. Prerequisites: LS 602 or equivalent and permission of department head.
MATHEMATICS

DR. SANDERS, Head of the Department

The graduate program of the Department of Mathematics is planned to meet the needs of four groups of students: (1) those preparing to teach mathematics, especially in high schools, junior, and community colleges; (2) those preparing for non-teaching professions or vocations in which mathematics plays an important part; (3) those who want to supplement study in other fields with a program in mathematics; and (4) those who are attracted to mathematics as a major scholarly pursuit, including those who plan to work toward a doctor's degree in mathematics.

The Department of Mathematics offers both the Master of Arts in Teaching degree with a major in mathematics and the Master of Science degree with a major in mathematics.

The minimum requirement for the Master of Arts in Teaching degree is twenty-one (21) semester hours of graduate credit in mathematics or fifteen (15) semester hours in mathematics and six (6) semester hours in a related discipline. In addition, twelve (12) semester hours in professional education are required. This must include at least fifteen (15) semester hours of courses numbered 600 or above (in mathematics, education, or both). The minimum requirement for the degree must include at least one course in algebra, at least one course in analysis, and at least one course in geometry or topology. The choice of electives is subject to the approval of the Head of the Department. It will be possible for all but three semester hours for this degree to be completed in three summer sessions.

The minimum requirement for the Master of Science degree with a major in mathematics is thirty (30) semester hours of graduate credit in mathematics. This must include at least fifteen (15) semester hours of courses numbered 600 or above. The minimum requirement for the degree must include at least one course in algebra, at least one course in analysis, and at least one course in geometry or topology. The choice of electives is subject to the approval of the Head of the Department. No
minor is required for this degree. A thesis in mathematics is an option which may be elected by the student.

Graduate students planning a program leading to the Master of Education degree may minor in mathematics with a minimum requirement of twelve (12) semester hours of graduate credit in mathematics. This must include one course in analysis, one in algebra, and one in geometry or topology.

COURSE OFFERINGS

MATHEMATICS

MATH 506. Mathematical Statistics. 3 credits.
Sampling distributions, point and interval estimation, tests of hypothesis, regression and correlation, design and analysis of experiments.

MATH 507. Special Topics in Middle Grade Mathematics. 3 credits.
This course will provide an introduction to content new to the contemporary mathematics curriculum. Among the areas that will be investigated are the mathematics of change, the elements of statistics, and selected applications of mathematics. (This course is not applicable to a degree program.)

MATH 510. Advanced Calculus I. 3 credits.
A rigorous treatment of fundamental concepts of the calculus, further topics from the calculus of functions of one variable, calculus of real functions of finitely many real variables. Prerequisite: At least two semesters of calculus.

MATH 511. Advanced Calculus II. 3 credits.
Continuation of MATH 510.

MATH 515. History of Mathematics. 3 credits.
Topics in the history of mathematics, chiefly before the eighteenth century.

MATH 520. Foundations of Euclidean Geometry. 3 credits.
A study of the structure and content of Euclidean geometry from an advanced standpoint.
MATH 525. Numerical Analysis. 3 credits.

Error analysis, interpolating functions, roots of equations by successive approximations, iterative methods for solving simultaneous linear equations, and programming. Prerequisite: MATH 237 (or the consent of the instructor).

MATH 530. Abstract Algebra. 3 credits.
A study of groups, rings, integral domains, and fields.

MATH 535. Topology I. 3 credits.
Introduction to general and point set topology.

MATH 550. Theory of Numbers. 3 credits.
Topics in number theory including divisibility properties, integral solutions of equations, congruences, prime numbers, arithmetic functions, and number theoretic functions.

MATH 560. Complex Variables I. 3 credits.
Classical theory of functions of a complex variable. Prerequisite or corequisite: MATH 510 or equivalent.

MATH 600. Foundations of Mathematics. 3 credits.
Introductory study of the logical structure of mathematics. The axiomatic method will be illustrated by developing the Peano theory of numbers.

MATH 610. Real Variables I. 3 credits.
Topics in real analysis including measure and integration theory. Prerequisite: MATH 510 and 511 or equivalents.

MATH 611. Real Variables II. 3 credits.
Continuation of MATH 610.

MATH 615. History of Modern Mathematics. 3 credits.
Topics in the history of mathematics since the seventeenth century.

MATH 620. Topics in Geometry. 3 credits.
A study of the relationships among different geometries using both synthetic and algebraic methods. The axiomatic structure of synthetic projective geometry; analytic projective geometry.

MATH 625. Topics in Algebra. 3 credits.
Vector spaces, linear transformations, and matrices.
MATH 636. Topology II. 3 credits.
    Continuation of MATH 535.

MATH 645. Algebra I. 3 credits.
    Theory of algebraic structures such as groups, rings, Euclidean domains, unique factorization domains. Prerequisite: MATH 530 or equivalent.

MATH 646. Algebra II. 3 credits.
    Continuation of MATH 645.

MATH 650. Differential Equations. 3 credits.
    General theory of ordinary differential equations including existence and uniqueness theorems, introduction to partial differential equations. Prerequisites: MATH 510 or 511 or equivalents; a first course in differential equations is desirable but not essential.

MATH 655. Differential Geometry. 3 credits.
    Introduction to modern differential geometry, including a modern treatment of topics from classical differential geometry. Prerequisites: MATH 510 and 511 or equivalents, and some knowledge of linear algebra.

MATH 661. Complex Variables II. 3 credits.
    Continuation of MATH 560.

MATH 680. Reading and Research. 3 credits.
    Opportunity is given the individual student for supervised reading and research in areas of his special interest. Reading and Research may be done only in the major field of study.

MATH 700. Thesis. 6 credits.
The graduate program of the Department of Music is designed to improve the effectiveness of music teachers through an in-depth study of the major field as well as to prepare students for the advancing standards of their profession. Students are guided into advanced-level courses which serve their individual needs, broaden and improve their skills, and acquaint them with current teaching practices. Courses are combined into flexible, balanced areas of music, music education, and applied music. Each student will be assigned an adviser who will assist in selecting the program of study.

The Department of Music offers a program of graduate study leading to the Master of Music Education degree, which is fully accredited by the National Association of Schools of Music.

The minimum requirement for the Master of Music Education degree is fifteen (15) semester hours of graduate credit in Music and the writing of a thesis, or twenty-one (21) semester hours of graduate credit in Music; and a minor of nine (9) semester hours in Education chosen from the graduate courses recommended by the School of Education. Graduate students may elect to minor in music within the Master of Education degree, earning a minimum of twelve (12) semester hours of graduate credit in courses approved by the Music Department.

Students electing to major in music will be expected to have completed an undergraduate major in music, and those electing to minor, an undergraduate minor in music.

Full-time students who elect to major in the Department of Music are required to attend Friday afternoon, departmental recitals while in residence.

Minimum requirements for a Music Major

| Semester Hours |  
|----------------|--------------------------|
| **Required courses** | 15-16  |
| 1. Music courses (MUS) | 6 |
2. Music Education courses (MUED) from the 600 level and including MUED 670  
3. Applied Music (MUAP) applied private study  3-4

**Electives**

1. Electives in Music (MUS) and Music Education (MUED)
2. MUED 501, 502, 503, 504, 505, 506, in conjunction with the Virginia State Music Camp at Massanetta Springs not to exceed a total of six (6) semester hours credit.
3. Workshop courses not to exceed a total of six (6) semester hours credit.
4. Music ensembles, MUAP 501, 502, not to exceed a total of two (2) semester hours credit applicable to the degree.

**Education**

Courses to be selected by the student and music adviser, in consultation with the student’s minor adviser in the appropriate education department.

**Minimum requirements for a Music Minor**

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<th>Semester Hours</th>
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<td><strong>Required courses</strong></td>
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<tr>
<td>1. Music courses (MUS)</td>
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<td>2. Music Education courses (MUED) from the 600 level</td>
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**Electives**

1. Music courses (MUS) excluding workshops and MUS 680, 690.
2. Music Education courses (MUED) from the 600 level
COURSE OFFERINGS

MUSIC

MUS 541-542. Music Arranging. 2 credits.
Arranging for instrumental and vocal ensembles including chorus, band, and orchestra. (MUS 541 is prerequisite to 542.)

MUS 543-544. Counterpoint. 2 credits.
Tonal counterpoint. Two, three, and four voice forms, florid counterpoint. Elementary imitative techniques. Form analysis. Prerequisites: MUS 242; MUS 543 is prerequisite to MUS 544.

MUS 551-552. Music Composition. 2 credits.
Composition in 20th century styles and techniques. Experience in the Music Department’s electronic studio for theory/composition majors and advanced students. Additional individualized instruction for theory-composition majors. Prerequisite: Permission of the instructor.

MUS 560. Keyboard Literature. 2 credits.
An examination of representative works of the High Baroque, Classical and Romantic Periods and the new directions of the Twentieth Century, for the major keyboard instruments. Does not require keyboard proficiency.

MUS 563. Twentieth-Century Music. 3 credits.
A survey of the trends found in twentieth-century music. Impressionism; “New Music” from Satie to Schoenberg, Bartok, and Hindemith. The music of contemporary American composers.

MUS 564. Symphonic Literature. 3 credits.
A historical survey of symphonic literature concentrating primarily on major composers and compositions from Baroque to present.

MUS 567. Solo Vocal Literature. 3 credits.
A survey of specific areas of vocal literature to include the Early English Air, Classic Italian Art Songs, the German Lied, the French Art Song, Contemporary Art Song, Opera, and Oratorio.

MUS 568. Organ Literature. 2 credits.
A survey of organ literature from 1600 to present. Emphasis will be placed on style characteristics of each historical era with some demonstration at the organ where appropriate.

MUS 569. Church Music. 2 credits.
A course for organists, designed to develop the practical skills re
quired of a church musician. Study and performance of hymns, solo and anthem accompanists, the liturgies of major religious denominations, and selected service music for the church year. This course will require that the student have proficiency on the instrument to the level of Organ 325 or the equivalent.

MUS 573. Private Piano Pedagogy. 2 credits.

Procedures and materials for the teaching of private piano, especially elementary and intermediate piano solo and ensemble literature for children, are emphasized. The problems of the adult beginner are studied.

MUS 574-575. Group and Class Piano Pedagogy. 2 credits.

A focus on methodology, educational practice, materials, and musical issues as they might apply to teaching beginning, intermediate and advanced students in group and class settings in the private studio, public schools, or on the college level. Student participation in group teaching experiences and experimentation with teaching techniques and materials under consideration.

MUS 576. Music Theory Pedagogy. 3 credits.

A review of traditional theory practices with relation to classroom instruction. Theory texts and unique approaches are critiqued in relation to current trends in music.

MUS 577-578. The Teaching of Voice. 2 credits.

Designed to acquaint the prospective voice teacher with a variety of reputable techniques based on scientific fact and a variety of styles and interpretation. Also included is a survey of languages and vocal literature for teaching.

MUS 605. Analytical Studies in Music Literature. 3 credits.

The study of representative works from all periods in terms of their formal and stylistic characteristics. Stylistically the analysis will include a consideration of the following: melodic and rhythmic elements, harmonic and contrapuntal techniques, texture (in its many ramifications), orchestration (vocastration) and the interrelation of these elements in the forms as a whole.

MUS 617. Advanced Conducting (Choral and Instrumental). 3 credits.

Refinement of baton technique. Score reading. Specific problems selected from standard works. Practical experience with choral and instrumental groups. Prerequisite: MUS 317-318 or equivalent.

MUS 661. Music of the Baroque and Classical Periods. 3 credits.

A study of vocal, instrumental and organ music of the Baroque
Period beginning with the late Renaissance composers Monteverdi, G. Gabrielli and Sweelinck, and culminating in Bach and Handel; the Mannheim School; the preclassical Viennese composers; Gluck, Haydn, Mozart, Beethoven.

MUS 662. Music of the Romantic Period. 3 credits.


MUS 680. Reading and Research. 3 credits.

An opportunity for the individual music major student to do supervised reading and research in a special interest area in music or music education.

MUS 690. Special Studies in Music. 1-2 credits.

This course is designed to give students an opportunity to pursue topics of special interest on an individual basis, which are of more limited scope than the three-credit courses allow. Topics may be in music theory, literature, education, or pedagogy.

MUS 698. Selected Topics in Music. 1-4 credits.

Courses in music or music education which are of a topical nature.

MUS 700. Thesis. 6 credits.

APPLIED MUSIC

Three or four semester hours of credit in applied music—piano, voice, organ, or an orchestral instrument—may be offered toward the master's degree, to include two to four credits on a major instrument and zero to two credits on a minor instrument.

MUAP 611, 612, 613, 614. Applied Music. (Major area) 1 credit.

One half-hour lesson a week. Five hours minimum practice per week is required. One credit each semester.

MUAP 621, 622. Applied Music. (Major area) 2 credits.

Two half-hour lessons a week. Ten hours minimum practice per week are required. Two credits each semester.
MUAP 511, 512, 513, 514. Applied Music. (Minor area) 1 credit.

One half-hour lesson a week. Five hours minimum practice per week is required. One credit each semester.

MUSIC ENSEMBLES

MUAP 509, 510. 1 credit.

In consultation with the adviser, students may elect the following ensembles: College band, chamber music, chorus, college chorale, concert choir, orchestra, Madison singers, jazz ensembles, woodwind ensembles, chamber orchestra, wind ensemble, brass ensemble, opera workshop, piano accompanying and piano ensemble, keyboard practicum: piano, keyboard practicum: organ, and vocal jazz choir.

May be repeated.

MUSIC EDUCATION

MUED 501. Workshops in Music Education. 1-3 credits.

Designed to provide a variety of workshop experiences for teachers in elementary and secondary school programs. The content of each workshop will be determined by interest and demand. No more than six credit hours earned in workshops in Music Education may be considered towards the Master of Music Education degree. See summer school brochure for workshops offered each summer.

MUED 501A. Summer Workshop. (June) 1 credit.

Teachers who attend the Virginia Music Workshop and Camp at Massanetan Springs and who devote a minimum of 30 hours to classes, study, and observation may earn one semester hour of graduate credit at Madison College. Since MUED 501 and 502-505 involve the Virginia Music Camp activities, these courses may be taken concurrently.

MUED 502. Topics in Choral Techniques and Literature. (June) 2 credits.

An opportunity for the student to select a topic of special interest in the field of choral music. Available only in the summer session as described below.

MUED 503. Topics in Instrumental Techniques and Literature. (June) 2 credits.

An opportunity for the student to select a topic of special interest in the field of instrumental music. Available only in the summer session as described below.
MUED 504. Topics in Pedagogy of Music Theory and Literature. (June) 2 credits.

An opportunity for the student to select a topic of special interest in the field of teaching theory and music literature. Available only in the summer session as described below.

MUED 505. Topics in Elementary School Music. (June) 2 credits.

An opportunity for the student to select a topic of special interest in the field of elementary music. Available only in the summer session as described below.

MUED 506. Topics in Music for Atypical Children. 2 credits.

An opportunity for the student to select a topic of special interest in the field of music in the education of children with handicaps, learning disabilities, also gifted children. Available only in the summer session as described below.

Teachers who attend the Virginia Music Workshop and Camp at Massanetta Springs through Madison College may earn a total of six semester hours of graduate credit by participating for three summers. In addition to the week of camp activities the student will spend the following week on the Madison College Campus in individual research and in seminars under the daily supervision of members of the graduate faculty in the Music Department. A student must select a different area of research interest in each of three summer sessions from the four courses listed above. It will be advisable for each student to have determined his area of interest and possible research topics prior to camp registration. At this registration, a representative from the Madison College Music Department will be available for the purpose of discussing and approving the selected field and research topic of each student. Dormitory and dining-hall facilities will be available for the week on the campus.


This course deals with broader concepts in music education in developing a coordinated and continuous program, and in examining methods of instruction.

MUED 671. Research and Trends in Music Education. 3 credits.

This course deals with psychological factors involved in the teaching of music, with individual measurements in music, and with more recent developments in music education. It is designed to include work which is significant to all branches of music teaching.
MUED 676. Advanced Methods and Materials for Elementary and General Music. 3 credits.
Study and laboratory work in Dalcroze, Orff and Kodaly techniques, development of learning centers, music in the allied arts, and other contemporary approaches and concerns.

MUED 677. Instrumental Materials and Techniques. 3 credits.
The course is intended to meet the needs of in-service instrumental music teachers in furthering their practical knowledge of the woodwinds, brass and percussion. Solutions to common teaching problems are emphasized, as is acquaintance with appropriate materials (methods, solos and large or small ensembles).

MUED 678. Choral Materials and Techniques. 3 credits.
A study of the problems, materials, and techniques of teaching choral music in the high school.

MUED 679. Music for Atypical Children. 3 credits.
Study of the musical needs and capabilities of atypical children both handicapped and gifted with emphasis upon planning curricula, selecting instructional materials, and utilizing appropriate teaching techniques.

MUED 681. The Supervision and Administration of Music. 3 credits.
The supervision of teachers of music; administrative responsibilities of music teachers and supervisors. The role of the supervisors of music in the schools.

MUED 691. Projects in Music Education. 3 credits.
Students who elect this course will select, formulate, carry through and evaluate a specific project in the teaching of music in their own schools. Registration may be for fall or spring term; periodic conferences and reports will be arranged.
PHYSICAL AND HEALTH EDUCATION

DR. CRAWFORD, Head of the Department

The Graduate offerings in physical and health education are provided under three degree programs.

The Master of Science in Education degree is designed to promote competency in teaching and administering physical and/or health education programs, to improve the quality and understanding of research, and to provide advanced instruction in specialized areas. This program requires a minimum of thirty (30) semester hours: twenty-one (21) semester hours must be in physical and/or health education including PE 510, Principles of Motor Learning in physical education programs. Nine (9) semester hours in education are required in a specific level of interest: elementary, secondary or higher education.

The Master of Science degree is designed to provide an in-depth study of a specialized area. A minimum of thirty (30) semester hours is required. A thesis is required in this program. Selected courses in related disciplines may be included.

A student working toward the Master of Education degree may minor in physical or health education. A minimum of twelve semester hours in physical and/or health education (including PE 510 Principles of Motor Learning in physical education programs) is required.

In all programs, courses must be selected with the approval of the major (and minor) advisor in accordance with the purposes of the student. Students electing a major or minor in the Physical and Health Education Department are expected to have adequate undergraduate preparation in the chosen area of graduate study. Some undergraduate courses may be taken concurrently with graduate work.

COURSE OFFERINGS

PHYSICAL EDUCATION

PE 501. Workshop in Physical Education. (Summer Only) 1-3 credits.

An intensive study of one aspect of physical education that is of current concern to physical educators in the field.
PE 506. A. B. Direction and Performance of Dance Repertoire. 3 credits each.
Experiences in the direction and technical training of dance companies, ensembles, and repertory groups, and in the performing of dance roles choreographed by dance faculty, artists-in-residence, or advanced students.

PE 510. Principles of Motor Learning. 3 credits.
Principles and theories of learning motor skills and their applications in teaching and coaching physical education activities.

PE 530. Contemporary Trends and Theories in Dance. 3 credits.
Investigation through directed readings and studio experiences of current theories and trends in dance as applicable to dance in education, performance, choreography and research.

PE 540. Physical Education in the Elementary Schools. 3 credits.
The planning, conducting, and supervising of the physical education program in the elementary schools. Special emphasis is given to newer concepts in physical activities for children.

PE 542. Movement Education for Handicapped Pre-School Children. 3 credits.
Investigation of the methods and materials used to conduct successful pre-school programs in movement education for the handicapped, including techniques of assessment and evaluation.

PE 570. Administration of Athletics. 3 credits.
Specific problems and new developments in the administration of athletic programs, including business procedures, equipment, facilities, conduct of athletic events, school law and liability, staff and public relations.

PE 575. Coaching the Female Athlete. 3 credits.
Coaching and factors which influence progress for the female athlete. Problems arising from the rapid growth of athletics for girls and women are discussed.

PE 607. Practicum in Choreography. 3 credits.
Experiences in choreography for solo, duet, and small groups, culminating in the presentation of a completed dance utilizing the modern, ballet, jazz, or folk idioms.

PE 610. Concert Production and Company Management. 3 credits.
Management and technical problems connected with budgeting, publicizing, booking, and producing dance concerts and residencies.
PE 625. Psychosocial Aspects of Sport. 3 credits.

Current research and literature in the psychology and sociology of sport and dance. The relationship between these issues within the American culture and its subcultures is discussed.

PE 630. Issues and Problems in Physical Education. 3 credits.

A study of the philosophical and cultural determinants of practices and problems in physical education. Possible solutions to problems and techniques for influencing professional behavior are discussed.

PE 631. Philosophy of Sport. 3 credits.

A critical review of literature concerning the nature and significance of sport from a philosophic perspective, including current modes of inquiry. Implications for sport in education are also discussed.

PE 645. Physiological Aspects of Muscular Activity. 3 credits.

Research regarding training regimens, diet and nutrition, energy requirements, the assessment of cardiovascular and neuromuscular efficiency, body compositions and somatotypes, environmental adjustments.

PE 650. Motor Behavior Assessment. 3 credits.

The use and construction of measuring devices in physical education. Experience in the analysis and interpretation of data is provided.

PE 655. Research Techniques in Physical Education. 3 credits.

Development of skill in the initiation, conduct, and interpretation of research. Laboratory procedures in movement analysis, physiology of exercise, and motor learning as well as historical and descriptive methods are included.

PE 680. Reading and Research. 3 credits.

Directed reading in designated areas and in areas of specialized interests. Investigation, research, and reporting.

PE 700. Thesis. 6 credits.

Prerequisite: PE 655 or equivalent.

HEALTH

HTH 501. Workshop in Health Education. (Summer Only) 3 credits.

An intensive investigation of one of the major current health problems such as sex education, drug abuse or environmental health.
HTH 510. Human Sexuality. 3 credits.
Components of human sexuality as they relate to the physical, social, and emotional health of children, adolescents, and adults. Such topics as physical and sexual changes during adolescence, abortions and contraceptives are discussed.

HTH 550. Recent Developments in Health Science. 3 credits.
A survey of recent developments and trends in medical and paramedical topics and programs.

HTH 560. Health Economics. 3 credits.
The analysis of the health dollar in terms of the purchase of health products and services including medical and allied medical care, insurance, health agencies, quackery and hospitals.

HTH 655. Chronic Diseases. 3 credits.
Survey of common chronic diseases of man with emphasis on prevention and early diagnosis. Topics include such diseases as cardiovascular, endocrine, ophthalmic, respiratory and neurologic disorders.

HTH 670. Instructional Design in Health Science. 3 credits.
Analysis of health instruction programs in elementary and secondary schools with emphasis on planning and implementing the health instructional curriculum.

HTH 672. Health of the School Child. 3 credits.
Development, maintenance, and protection of the health of students and school personnel through examinations, screening, special services, disease control, emergency care and health records.

HTH 680. Reading and Research. 3 credits.
Directed reading in designated areas of specialized interest. Investigation, research, and reporting.

HTH 700. Thesis. 6 credits.
Prerequisite: Psychology 600 or Education 630.
PHYSICS

DR. KRIBEL, Head of the Department

The graduate program in the Department of Physics is designed to meet the needs of students preparing to teach physics in high schools and junior colleges, students preparing for non-teaching professions or vocations in which physics plays an important part, students who wish to supplement study in other fields with a program in physics, and students who plan eventually to work toward a doctor’s degree in physics.

The Department of Physics offers the Master of Science in Education degree with a major or minor in physics.

The minimum requirement for the Master of Science in Education degree with a major in physics is twenty-one (21) semester hours of graduate credit in physics and nine (9) semester hours of graduate credit in education. This must include at least fifteen (15) semester hours of courses numbered 600 or above (in physics, education, or both).

Graduate students planning a program leading to the Master of Education degree may minor in physics with a minimum requirement of twelve (12) semester hours of graduate credit in physics.

COURSE OFFERINGS

PHYSICS

PHYS 501. Workshop in Physics. 3 credits.
Concentrated study in particular areas of physics.

PHYS 505. Matter and Energy. 3 credits.
This course is intended to give graduate students planning to teach in the elementary school an understanding of one of the major physical science problems facing mankind. Emphasis is placed on matter and energy as unifying concepts in the physical sciences.

PHYS 520. Classical Mechanics. 3 credits.
Classical mechanics through Lagrangian and Hamiltonian formulation of Newton’s laws, particle and rigid body motion, variational
principle. Topics also include small oscillations, canonical transformation, and relativistic mechanics.

**PHYS 530.** Experimental Nuclear Physics. 3 credits.

An integrated lecture-laboratory study of natural and artificial radioactivity. Topics include rates of radioactive processes, interactions of radiations with matter, and gamma spectroscopy. Characteristics of a variety of thermal neutron reactions will be illustrated using a Ci Pu-Be isotopic source.

**PHYS 540.** Solid State Physics. 3 credits.

Forces between atoms, crystal structure, lattice vibrations and thermal properties of solids, free electron theory of metals, band theory of solids, semi conductors, dielectrics.

**PHYS 550.** Electrodynamics. 3 credits.

A study of electrostatics, magnetostatics and electrodynamics with special emphasis on the application of Maxwell’s equations; for example, propagation, reflection, refraction, diffraction, dispersion and radiation of electromagnetic waves.

**PHYS 560.** Quantum Mechanics. 3 credits.

A basic course in quantum mechanics including a short review of selected topics from atomic physics. Topics to be covered include uncertainty principle, Schroedinger equation, operators, eigenfunctions, potential wells, harmonic oscillator, hydrogen atom, and transition probabilities.

**PHYS 570.** Plasma Physics. 3 credits.

An introduction to the plasma state investigating motions of charged particles in fields, collisions, adiabatic invariants, fluid and kinetic descriptions of a plasma, diffusion, plasma oscillations and waves, confinement, instabilities and applications.

**PHYS 580.** Astrophysics. 3 credits.

An introduction to the problems of modern astronomy and to the quantitative application of physical principles to these problems. Topics of study include stellar structure and evolution, the interstellar medium and star formation, cosmic rays, pulsars, galactic structure, extragalactic astronomy, and cosmology.

**PHYS 615.** Theoretical Physics. 3 credits.

Mathematical development of theories and problems in mechanics, thermodynamics, wave motion, electricity, magnetism, optics, and modern physics. This course is especially designed to provide the necessary flexibility for students of varying backgrounds and levels of preparation who may wish to enter the graduate program.
PHYS 620. Experiments in Physics. 3 credits.

Provides students preparing to teach physics an understanding and experience in performance of important experiments in classical and modern physics; for example, laser optics, photoelectric effect and the harmonic oscillator.

PHYS 630. Experimental Design. 3 credits.

Emphasizes developing of techniques in literature search, experiment design and analysis of data.

PHYS 645. Mathematical Physics. 3 credits.

Mathematical topics useful in solving important physical problems. Topics covered include vector analysis, general curvilinear coordinates, ordinary and partial differential equations, matrices, and complex analysis.

PHYS 660. Recent Developments and Advanced Topics in Physics. 3 credits.

This course is designed to offer opportunity to explore in depth special areas of the student's own choosing. Topics areas will be selected in consultation with adviser and staff.

PHYS 680. Reading and Research. 3 credits.

Opportunity is given the individual student for supervised reading and research in areas of his special interest. Reading and Research may be done only in the major field of study.

PHYS 700. Thesis. 6 credits.

SCIENCE

SCI 501. Workshop in the Teaching of Elementary Science. (Summer) 3 credits.

A course providing workshop experiences relating to recent developments in the teaching of science in the elementary school.
POLITICAL SCIENCE AND GEOGRAPHY

DR. NELSON, Head of the Department

The Department of Political Science and Geography offers graduate courses in Political Science and in Geography designed to broaden knowledge in these fields and to serve those teaching in these subject matter areas.

Graduate students pursuing the Master of Education degree may minor in Political Science by successfully completing twelve (12) semester hours of graduate Political Science credit.

Graduate students pursuing the Master of Arts in Education degree with a major in Social Science may concentrate in Political Science. A concentration in Political Science requires nine (9) semester hours or fifteen (15) semester hours if a thesis is included.

Graduate courses in Geography are offered by this department. These courses may be applied to the Master of Arts in Education degree.

COURSE OFFERINGS

GEOGRAPHY

GEOG 550. Geography of Contemporary Problem Areas. 3 credits.

This course is designed to emphasize the physical, economic, historical and cultural background of selected regions and nations, from a contemporary perspective. It will present an analysis for understanding present day conditions, and the social significance of the events occurring in these areas. In addition to the extensive use of maps in the course, pertinent outside readings will be required.

GEOG 580. Cultural Geography. 3 credits.

A study of aspects of culture within geographic settings: language, religion, political organization, pattern of livelihood, settlements, population growth and movement. The interaction of man and his geographic environment will be stressed.

GEOG 590. The Tropical World. 3 credits.

This course is designed to highlight the areas of the world bordering on the Equator, including Central Africa, Southeastern Asia, Central
and Northern Latin America, and the Pacific. Students will study the physical environment's relationship to the cultural and social characteristics that together make these areas part of the present world political struggle.

**GEOG 680. Reading and Research in Geography. 3-6 credits.**

Opportunity is offered the individual student for reading and research in the aspects of geography that are of special interest to him. Approval must be obtained from the Head of the Department.

**POLITICAL SCIENCE**

**POSC 501. Workshop in Political Science. 3 credits.**

This course is designed primarily for social studies teachers who will help to select political topics of current interest and demand for intensive study in a concentrated period of time, usually during the summer months.

**POSC 529. Problems of International Relations. 3 credits.**

An analytical study of international problems dealing with such topics as the United Nations, regionalism, political conflict, international law, nationalism, balance of power, and arms control. Problems may be determined by the exigencies of the contemporary international scene.

**POSC 540. Problems of American National Government. 3 credits.**

This course is designed as an intensive survey of national government in the U. S. with primary emphasis on the current problems facing the U. S. government. Problems to be examined will include those involving the presidency, Congress, bureaucracy, and the federal court system.

**POSC 601. Special Studies Seminar in Government. 3-6 credits.**

This course is designed to acquaint students with problems, functions, and operations of government, as these relate to special areas of interest. Different subject-matter content will be offered in different years. The format of the course will utilize individual contributions of student research.

**POSC 610. Modern Political Theory. 3 credits.**

This course will examine the contributions of political thinkers from Plato to the present with emphasis on the more recent theorists. Among those thinkers to be considered will be Machiavelli, Bodin, Hobbes, Locke, Montesquieu, Rousseau, Burke, Hegel, and Marx.
POSC 650. Comparative Government. 3 credits.

This course is designed to acquaint the student with the governmental forms and structures of the major world powers. A comparison is made between the American Federal Government and the governments of England, France, West Germany, and the Soviet Union.

POSC 659. Political and Social Thought, Ancient to Early Modern Times. 3 credits.

(See HIST 659 for description.)

POSC 661. Seminar in Marxist-Leninist Theory. 3 credits.

A study of the most significant ideas concerning politics, society, economics, and philosophy which have shaped Communism and Marxist varieties of Socialism.

POSC 680. Reading and Research. 3 credits.

This course offers the individual student the opportunity for reading and research under faculty supervision in the areas of government which are of special interest to the student.

POSC 695. Practicum in Political Science. 3-6 credits.

Provides graduate students with an opportunity for practical experience in, and direct observation of, a political agency. Work-experience (approximately 135 hours) will be supervised by an official of the agency to which the student is assigned, and a member of the faculty. An extensive report, based on research in primary source material, theoretical literature, and the student's Practicum experiences, will be required. Students who intend to enroll are requested to notify the Department as far in advance as possible. Prerequisite: Permission of Instructor or Head of the Department.

POSC 700. Thesis. 6 credits.
PSYCHOLOGY

DR. McGEE, Head of the Department

Graduate courses are designed to extend the scholar's breadth and depth of knowledge in specific content areas, and to enhance the student's ability to understand people in a complex society. Courses are open to majors in other subject fields, unless prerequisites and limitations are specified in the course descriptions.

The Department of Psychology offers the Master of Arts degree in General Psychology, the Master of Education in School Psychology, and the Master of Education in Counselor Education.

Students planning a program of study leading to the Master of Education degree may minor in Psychology with a minimum of twelve (12) semester hours of graduate credit in Psychology. Courses are to be selected with the approval of the minor adviser.

GENERAL PSYCHOLOGY PROGRAM

The program leading to the Master of Arts degree in General Psychology is designed with three goals in mind. One goal is to train students in the application of psychological principles in a variety of human service settings. A second goal is to serve students who seek the Masters degree as a preliminary step to further post-graduate study. Finally the program seeks to train students for possible employment as teachers of psychology in the community colleges. These three goals are satisfied through course offerings in the major content areas of psychology, by close association between the student and the faculty and by the opportunity for practicum or thesis work.

Minimum admission requirements for the General Psychology program include: a satisfactory undergraduate grade point average, satisfactory scores on both the Aptitude and Advanced portions of the Graduate Record Examination, two letters of recommendation, and a minimum of 18 semester hours of undergraduate psychology courses. These courses should include a sampling from the following areas:
personality, abnormal, learning, behavior modification, social, history and systems, experimental, statistics, and developmental.

The program requires completion of 33 semester hours of courses in psychology. In addition a written comprehensive examination will be required of all students near the completion of the program. The basic outline of the program is as follows:

<table>
<thead>
<tr>
<th>Semester Hours</th>
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<tbody>
<tr>
<td>Minimum Requirements 33</td>
</tr>
</tbody>
</table>

1. Required Courses 12
   - Psyc 505 Systems and Theories of Psychology, 3 semester hours
   - Psyc 600 Research and Statistical Methods in Psychology, 3 semester hours
   - Psyc 695 Practicum in Psychology, 6 semester hours

2. Elective Courses 21
   Elective courses are chosen with advisor approval in order to meet the needs of the student.

SCHOOL PSYCHOLOGY PROGRAM

The graduate program in School Psychology is designed to prepare specialists who are competent child-educational psychologists. Preparation in School Psychology also qualifies students for professional employment in some clinics and agencies, and for further postgraduate work.

The major focus is placed upon offering the student a firm foundation of psychological knowledge, skills and techniques. Emphasis is also on consulting roles and literacy in professional research procedures. The program prepares graduates to perform competently in psychological-educational assessment and intervention, and to serve as consultants to parents, teachers, and community programs. The Madison
program has a developmental, case study-consultation philosophical foundation.

The program is a two year, 60 credit sequence designed in two levels. The M.Ed. degree is awarded upon successful completion of Level I, which includes 30 semester hours of foundation courses in Education and Psychology. For students who wish to enroll for the M.Ed. in Level I only, options in Psychological Foundations and in Measurement are available.

Level II is comprised of 30 semester hours of professional technique courses and field experiences. Normally a full academic year of internship is required. Level II is designed to meet certification requirements for school psychologists in Virginia and other states. The Program is approved by the Virginia Department of Education and the National Council for Accreditation in Teacher Education. Virginia is a member of the NASDTEC and the Interstate Certification Reciprocity Consortia.

Admission requirements for Level I include: satisfactory scores on the Graduate Record Examination, admission interviews, and satisfactory past performance and personal qualification as determined by reference questionnaires and transcripts. Admission requirements for Level II include a 3.5 average in Level I, endorsement by two school psychology faculty, satisfactory performance on a comprehensive examination, and general records screening.

The program assumes an 18 semester hour minimum undergraduate background in Psychology and Education. This background should include the following areas of Psychology: Developmental, Educational, Social or Personality, Abnormal, Tests and Measurement, and Statistics.

Teachers are eligible for admission. Teachers with deficiencies in psychology may need additional course work to meet requirements.

Students usually require two and one half years to complete the 60 semester hours which may include a paid internship prior to certification. A written comprehensive examination is required near completion of Level I, and an oral examination is required for completion of Level II.
LEVEL I: MASTER OF EDUCATION DEGREE

Minimum Requirements 30

1. Required Courses 18
   PSYC 525 Role and Function of the School Psychologist
   PSYC 600 Research and Statistics Methods in Psychology
   PSYC 627 Psychological Foundations of Education
   PSYC 670 Group Psychological Tests
   SPED 630 Advanced Study of the Exceptional Child
   ELED 502 The Elementary School Reading Program

2. Elective Courses 12
   Selection of electives at Level I is a result of advisement and is designed to meet the needs of the student. With adviser approval, electives may be drawn from the graduate offerings of the College.

LEVEL II: PROFESSIONAL TRAINING-CERTIFICATION

Minimum Requirements 30

1. Required Courses 18-21
   PSYC 650 Consultation and Intervention Techniques
   PSYC 675 Individual Intelligence Testing
   PSYC 677 Psychoeducational Assessment Techniques
PSYC 678 Practicum in School Psychology
PSYC 679 Personality Assessment Techniques
PSYC 690 Internship in School Psychology

2. Elective Courses

Selection of electives at Level II is a result of advisement, and is designed to meet the needs of the student, particularly in relation to requisite skills and techniques necessary for efficient performance as a certified school psychologist. With adviser approval, electives may be drawn from the graduate offerings of the College.

Strong undergraduate preparation and/or experience may be accepted as competency credit for any of the above areas in Levels I or II with the approval of the Adviser and Program Director.

COURSE OFFERINGS

PSYCHOLOGY

PSYC 501. Workshop in Psychology. 1-3 credits.
Designed to provide a study of a particular topic of interest in psychology. Prerequisite: Permission, Head, Department of Psychology.

PSYC 502. Use of Computers in the Behavioral Sciences. 3 credits.
This course will expose the students to the basics of computer programming with an emphasis on problems encountered by the behavioral scientist. Students will write programs in both FORTRAN and BASIC.

PSYC 505. Systems and Theories of Psychology. 3 credits.
A detailed study of systems and theories of psychology as they have evolved from their historical roots. Special emphasis is placed on the philosophy of psychology as a science and the logic of system building.

PSYC 506. Potentialities of Aging. 3 credits.
This course is designed to offer advanced student experiences in
coming to understand and working with the assets and potentialities of older people.

**PSYC 510.** Advanced Developmental Psychology. 3 credits.

An overview of the origins and development of behavior extending from the prenatal period through adolescence and maturity.

**PSYC 520.** Psychology of Agression. 3 credits.

The course will include a comparative study of both interpersonal and intergroup theories of aggression with an emphasis on the methods which may be employed to reduce hostility and aggressive tendencies in various settings.

**PSYC 522.** Advanced Abnormal Psychology. 3 credits.

Causes, symptoms, dynamics, and leading therapeutic approaches to the neuroses and psychoses; contrasts normal behavior with pathological. The course is relevant to the service professions.

**PSYC 525.** Role and Function of the School Psychologist. 3 credits.

Provides an understanding of the setting, issues and responsibilities with which a school psychologist must deal.

**PSYC 550.** Creative Problem Solving. 3 credits.

Major psychological theories relating to the explication and training of human creative problem solving are explored, with emphasis on common measurement dilemmas and current program directions.

**PSYC 600.** Research and Statistical Methods in Psychology. 3 credits.

An introduction to research and statistical methods useful to psychologists.

**PSYC 610.** Learning Theories. 3 credits.

A study of historical and current learning theories. Included in a consideration of research contributions which bear upon the theories.

**PSYC 621.** Behavior Dysfunction in School Children. 3 credits.


**PSYC 640.** Current Issues in Behavior Modification. 3 credits.

Advanced treatment of current behavior modification procedures
in a variety of applied settings, including ethics related to the use of behavior modification.

**PSYC 647.** Topics in Social Psychology. 3 credits.

An advanced study of the research and theory of the way an individual's social behavior is influenced by the behavior and attitudes of other individuals.

**PSYC 648.** Research in Human Development. 3 credits.

Research related to principles basic to understanding growth and development of human beings, including dynamics influencing behavior and techniques for studying behavior. **Prerequisite: PSYC 233-234 or equivalent.**

**PSYC 649.** Child Study—Community Services. 3 credits.

Acquaints school psychologists with the child study teamwork model in schools.

**PSYC 650.** Consultation and Intervention Techniques. 3 credits.

Provides skills in consultation and intervention techniques employed by psychologists with children, teachers, administrators and parents. Additional emphasis is placed on social system analysis and role conflict in schools.

**PSYC 651.** Principles of Psychotherapy. 3 credits.

Theoretical and cognitive bases for understanding frequently used therapeutic strategies and techniques. **Prerequisite: Permission of instructor.**

**PSYC 670.** Group Psychological Tests. 3 credits.

Evaluation, interpretation and application of standard group psychological tests, including an introduction to test construction, validity and reliability.

**PSYC 671.** Psychometric Theory. 3 credits.

Examines measurement theory, technical characteristics of psychological measuring instruments, and the basic mathematical rationale underlying psychometric theory.

**PSYC 672.** Test Construction. 3 credits.

Principles of test construction with emphasis on behavior objectives and analyses; item construction, selection, and analysis; scaling methods; test standardization; and norming. **Prerequisite: PSYC 671.**

**PSYC 675.** Individual Intelligence Testing. 3 credits.

Students develop proficiency with administration, interpretation
and reporting of individual intelligence tests; the WISC, WAIS, WPPSI and BINET. May be taken concurrently with PSYC 670. Prerequisite: Permission of instructor and admission to the School Psychology Program.

**PSYC 677. Psychoeducational Assessment Techniques. 3 credits.**

An advanced laboratory course for students in School Psychology. Covers evaluation of skills and abilities which relate to psycholinguistics, learning disabilities, psycho-motor function and achievement disorders. Enrollment is limited to allow individual instruction and supervision. Prerequisite: PSYC 670, 675 and permission of the instructor.

**PSYC 678. Practicum in School Psychology. 3 credits.**

Provides a variety of supervised field experiences in schools and other settings. Prerequisite: Permission of instructor.

**PSYC 679. Personality Assessment Techniques. 3 credits.**

Advanced students achieve basic understanding and competency in administration and interpretation of personality assessment procedures most frequently used in School Psychology. Enrollment is limited to allow individualized instruction and supervision. May be taken concurrently with PSYC 677. Normally a full academic year of internship is required. Prerequisite: PSYC 670 and 675, permission of instructor.

**PSYC 680. Reading and Research. 3 credits.**

Opportunity for directed reading and or research in areas of special interest; may be taken only in major field of study. Prerequisite: Permission of department head.

**PSYC 690. Internship in School Psychology. 3 or 6 credits.**

Provides the advanced student with supervised on-the-job training. Three semester hours is equivalent to 600 clock hours of work in one semester. Activities cover pupil assessment, parent and staff consultation, and involvement in the full range of other daily activities required of school psychologists. Prerequisite: Completion of required courses in school psychology and/or permission of program coordinator.

**PSYC 691. Seminar for School Psychologists. 1-6 credits.**

Open to practicing school psychologists and advanced students in school psychology, covers contemporary professional issues of concern in the field. Prerequisite: Permission of instructor.

**PSYC 692. Professional Seminar. 1-6 credits.**

Provides opportunities for continuing education for post-graduate psychologists interested in contemporary professional issues and developments in the field.
PSYC 695. Practicum in Psychology. 6 credits.

Provides a variety of supervised field experiences in community agencies and/or industry. Prerequisite: Permission of instructor.

PSYC 700. Thesis. 6 credits.

COUNSELOR EDUCATION PROGRAM

The graduate program in Counselor Education is designed to prepare competent professionals to serve the community and schools in six areas. The areas of emphasis encompass training students for employment as elementary and secondary school counselors or pupil personnel administrators, college counselors, personnel workers or administrators in higher education, business or industry, career counselors, pastoral counselors, rehabilitation counselors and psychological counselors in community agencies and institutions. The program is also designed for persons interested in applying counseling skills in other human service fields.

The Counselor Education major leads to the Master of Education degree. Normally 36 semester hours of credit are taken to complete the program. A second level program is available consisting of an additional 30 hours of graduate study, particularly in Psychological Counseling where the professional entry level usually requires two full years of graduate study.

For those graduates who wish to work in schools, the program is designed to meet the 1973 “Certification Endorsement Regulations for Pupil Personnel Services” adopted by the Virginia State Board of Education. For others, the program meets national accreditation standards for the preparation of professional counselors prescribed by the Association for Counselor Education and Supervision, and is accredited by N.C.A.T.E. and the Commonwealth of Virginia.

Students admitted to the elementary and secondary school counselor programs or pupil personnel program must have a minimum of twelve semester hours of undergraduate preparation in Education and/or Psychology. Students interested in other counseling programs must have a minimum of twelve semester hours in the behavioral sciences.
All Counselor Education majors must hold a bachelors degree with a satisfactory grade point average. All students must have acceptable scores on the Graduate Record Examination, and undergo additional screening procedures as defined by the Counselor Education Committee.

Basic program requirements consist of the core curriculum and electives which are dependent upon students’ professional goals.

### Semester Hours

<table>
<thead>
<tr>
<th>Minimum Requirements</th>
<th>Semester Hours</th>
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<tbody>
<tr>
<td>1. Core Courses</td>
<td>24</td>
</tr>
<tr>
<td>COED 510 Contemporary Issues in Counseling</td>
<td></td>
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<tr>
<td>COED 600 Counseling Theories</td>
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<tr>
<td>COED 601 Counseling Techniques</td>
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<td>COED 610 Practicum in Counseling</td>
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<tr>
<td>COED 620 Advanced Counseling Practicum</td>
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<tr>
<td>COED 640 Career Development</td>
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<tr>
<td>COED 650 Group Counseling</td>
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<tr>
<td>COED 660 Tests, Measurement and Appraisal in Counseling</td>
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<tr>
<td>2. Courses from area of specialization chosen with adviser approval</td>
<td>6</td>
</tr>
<tr>
<td>3. Course work in research</td>
<td>3</td>
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<tr>
<td>4. Course work in human growth and development.</td>
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</tbody>
</table>

The student majoring in Counselor Education may elect to take COED 700 (Thesis) for six credits.

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**COUNSELOR EDUCATION**

**COED 501.** Workshops in Counseling. 1-3 credits.

Provides a detailed study of a topic interest in counseling.
COED 510. Contemporary Issues in Counseling. 3 credits.
Provides an in-depth examination of contemporary issues in counseling including counselor ethics, standards of preparation and certification, professional organizations, ethnic group relations, sexism, and differing life patterns.

COED 520. Dynamics of Mental Health. 3 credits.
A detailed study of the personal and social factors related to the development of individual mental health and mental illness.

COED 530. Counseling in Elementary Education. 3 credits.
A detailed study of roles of counselors and guidance personnel in elementary schools. Emphasis in counseling techniques is stressed dependent upon the student’s interest level.

COED 540. Personnel Services in Higher Education. 3 credits.
A detailed study of the personnel services offered in colleges and universities.

COED 541. Residence Hall Administration. 3 credits.
A study of residence hall administration, physical plant, budgets, staff selection and training, and developmental needs of students.

COED 550. Organization and Administration of Guidance Programs. 3 credits.
An in-depth consideration of the theory, philosophy, principles, organization, and personnel practices involved in pupil personnel services.

COED 560. Introduction to Community Agency Counseling. 3 credits.
A study of the organization, scope, and nature of various community agencies from both the administrative and counseling perspective.

COED 561. Introduction to Vocational Rehabilitation Counseling. 3 credits.
An introduction to vocational rehabilitation, encompassing the history, philosophy, rehabilitation process, and contemporary issues in the field.

COED 562. Introduction to Counseling the Aged. 3 credits.
An exploration of the various topics and approaches to counseling with the aged, including a study of community resources available to meet the needs of the aged.
COED 563. Alcoholism Counseling. 3 credits.
A study of the disease alcoholism to include related personal, social and physiological factors, and methods of rehabilitation and counseling the alcoholic.

COED 564. Introduction to Marriage and Family Counseling. 3 credits.
A study of the various topics and approaches of marriage and family counseling, focusing on family dynamics and social change.

COED 600. Counseling Theories. 3 credits.
Provides a study of the philosophy and principles of various schools of counseling, and the techniques employed in the counseling process by each of these schools. A basic encounter experience is an integral part of this course.

COED 601. Counseling Techniques. 3 credits.
Experientially based counseling technique including micro counseling, role playing, simulation, interpersonnel process recall, affective perception and experience as a client.

COED 610. Practicum in Counseling. 3 credits.
Provides observation of and participation in counseling under supervision, including role playing, listening to tapes, testing, organizing and using case records, and the actual counseling with individuals or groups seeking services from counselors. Prerequisite: COED 600, 601, and 650.

COED 620. Advanced Counseling Practicum. 3 credits.
An internship and seminar under supervision with the student placed in an actual on-the-job experience selected on the basis of the future career goal of the student. Prerequisites: COED 600, 601, 610 and 650.

COED 630. Advanced Theories and Techniques of Counseling and Psychotherapy. 3 credits.
An examination of current theories and techniques of counseling and psychotherapy in a variety of settings and in relation to theories of learning and adjustment. Prerequisite: COED 600 and 601.

COED 640. Career Development. 3 credits.
A survey of the sources of occupational and educational information and their use in counseling individuals and groups, covering philosophy and principles underlying integration of occupational and educational guidance, the study of community job resources, with plant and industrial visits.
COED 641.  The Role of Counselors in Career Education.  3 credits.
A study of concepts, models and resources focusing on the development of career education programs.

COED 650.  Group Counseling.  3 credits.
A survey of the theories and practices relating to group guidance and counseling. Prerequisite: COED 600 and 601.

COED 660.  Tests, Measurements and Appraisals in Counseling.  3 credits.
Development of a framework for understanding the individual, including the study of data gathering methods, individual and group testing, case study approaches, and individual differences. Includes elementary statistical procedures, used in testing and research designs appropriate for practicing counselors.

COED 670.  Rehabilitation Counseling: The Severely Disabled.  3 credits.
A study of the nature of disabled and vocationally handicapped individuals and an exploration of rehabilitation services available to them. Ways of developing effective relationships between counselor and client in order to maximize rehabilitation potential are emphasized.

COED 680.  Reading and Research.  3 credits.
Opportunity for directed reading and research in areas of professional interest and goals. Must be done in the major field of study. Prerequisite: Permission of program director.

COED 700.  Thesis.  6 credits.
SECONDARY EDUCATION AND SCHOOL ADMINISTRATION

DR. WILLIAM D. SMITH, Acting Head of the Department

The Department of Secondary Education and School Administration offers graduate programs for students who desire specialized preparation in professional education and for students who desire additional preparation for classroom teaching. The Department also offers graduate courses which support programs throughout the School of Education.

AVAILABLE PROGRAMS

Master of Education: Students may major in Secondary Education or School Administration, including secondary or elementary principalship. A 12 semester hour minor in a selected discipline or additional work in Secondary Education or Higher Education may be included in this degree.

Master of Arts in Teaching: This degree includes a 12 semester hour minor in Secondary Education or Higher Education and 21 semester hours of work in the subject matter field or fields which are the student's major interest.

Master of Music Education: This degree includes a 9 semester hour minor in Secondary Education or a 9 semester hour minor in Higher Education and is available to students majoring in Music.

Master of Arts in Education: This degree includes a 9 semester hour minor in Secondary Education or a 9 semester hour minor in Higher Education and is available to students majoring in Social Science.

Master of Science in Education: This degree includes a 9 semester hour minor in Secondary Education or a 9 semester hour minor in Higher Education and is available to students majoring in Business Education, Physical and Health Education, or Physics.

Certificate of Advanced Graduate Study, Post-Masters Program in
Educational Administration: Madison College and Virginia Polytechnic Institute and State University have developed a cooperative post-masters program leading to the Certificate of Advanced Graduate Study and the Doctorate in Education. The program will have two areas that students can pursue in educational administration: general administration or educational business management. The complete program for the Certificate of Advanced Graduate Study may be taken on the Madison College campus while those students who wish to go on to the Ed.D. degree must complete additional courses in residence on the Virginia Polytechnic Institute and State University campus. See the Head of the Department for additional information.

Minor in Higher Education: The Department offers a 9 and 12 semester hour minor in Higher Education which should be elected by those students majoring in an academic area and planning to enter teaching at the undergraduate level.

Minor in Education of the Gifted: The Department offers a 12 semester hour minor program which is designed for students who desire concentrated study of educational programs for gifted pupils in the secondary school.

Students, regardless of classification, must have completed at least nine hours of course work in undergraduate professional education before enrolling in graduate courses in education. Generally, the nine hours should have included study in educational or developmental psychology, curriculum, and methods of teaching. Exceptions to prerequisite requirements may be made for students entering the minor in higher education. Exceptions to all departmental requirements must be approved in writing by the Head of the Department and by the Dean of the School of Education.

Students majoring or minoring in degree programs offered by the Department must follow several fundamental guidelines:

(1) Consult your major and minor advisors for their advice and approval regarding your program. The Department will not honor programs which have been undertaken without consulting the appropriate advisors.
(2) Plan to count no more than 6 semester hours of workshop credit in any degree program. The Department of Secondary Education and School Administration will not accept “workshop in teaching” courses offered by departments outside the School of Education for elective credit in the Department’s major or minor programs. This type of workshop must be counted for credit in the major or minor program of the Department offering the workshop.

(3) Maintain an adequate balance between 500-level and 600-level courses in any program. The Graduate School requires that no less than half the courses in any major or minor be 600-level courses.

(4) Secure the required approval of your major and/or minor advisor for any course credits you plan to transfer into a Madison degree program. The Graduate School will accept no more than 12 semester hours (9 semester hours in the major, 3 semester hours in the minor) of credit by transfer. The Department will accept no credit by transfer into minors of less than 12 semester hours.

REQUIREMENTS FOR A MASTER OF EDUCATION DEGREE
(MAJOR IN SECONDARY EDUCATION)
(30 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
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<tbody>
<tr>
<td>SEED 607</td>
<td>3</td>
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<tr>
<td>EDUC 630</td>
<td>3</td>
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<tr>
<td>EDUC 625 or READ 506</td>
<td>3</td>
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<tr>
<td>A Foundations Elective</td>
<td>3</td>
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</tbody>
</table>

(1) Secondary School Curriculum and Co-Curriculum
(2) Research Methods in Education
(3) Evaluation in Education
(4) High School and Adult Reading

EDUC 505 The Role of the School in Society
EDUC 507 Knowledge and Education
Semester Hours

EDUC 603  Philosophy of Education
EDUC 620  Comparative Education

(5) A Methods Elective Selected from:

EDUC 501  Workshop in Education
SEED 533  Teaching Mathematics in the Secondary School
EDUC 536  Teaching in Multi-Ethnic Schools
SEED 537  Teaching Science in the Secondary School
SEED 538  Teaching Social Studies in the Secondary School
SEED 660  Instructional Development in the Secondary School

Semester Hours

(6) An Elective Selected From the Offerings of the Secondary Education Department or Other Departments in the School of Education. Possibilities Include:

(a) Any School of Education Workshop Course
(b) LSEM 540  Audio-Visual Instruction/Library Science Department
(c) PSYC 628  Advanced Adolescent Psychology/Psychology Department
(d) SPED 512  Behavior Management in the Classroom/Special Education Department
(e) PE 625  Psychosocial Aspects of Sports/Physical and Health Education Department
(f) ADSU 650  Supervision of Instruction/Secondary Education and School Administration Department
The courses listed above are suggestions. The choice is to be made by the student and approved by the major advisor.

(7) Supplementary Courses:

In this part of the program, there are two options:

(a) Any student may plan with his major advisor a selection of courses designed to meet the special needs of the student’s program. All programs of this nature must reflect an appropriate relationship to the student’s major in Secondary Education. Areas of special interest include:

(1) Administration and Supervision
(2) Guidance and Counseling
(3) Library Science and Educational Media
(4) Special Education Services
(5) Teaching the Gifted
(6) Reading


REQUIREMENTS FOR A MASTER OF ARTS IN TEACHING DEGREE
(33 semester hours)

(1) Each student must select with the approval of his advisors twenty-one (21) semester hours of work in a subject-matter field(s). Each student must consult with the Dean of the Graduate School
in order to determine what teaching field or fields are of primary interest. In this conference, the appropriate advisement procedures, based on the student's needs for a particular degree program will be determined.

(2) Each student must complete a 12 semester hour minor in Secondary Education or Higher Education.

**REQUIREMENTS FOR A MASTER OF MUSIC EDUCATION DEGREE**

(30 semester hours)

(1) Students must complete a 21 semester hour major in Music.

(2) Students must complete a 9 semester hour minor in Secondary Education or Higher Education.

**REQUIREMENTS FOR A MASTER OF ARTS IN EDUCATION DEGREE**

(30 semester hours)

(1) Students must complete a 21 semester hour major in Social Science.

(2) Students must complete a 9 semester hour minor in Secondary Education or Higher Education.

**REQUIREMENTS FOR A MASTER OF SCIENCE IN EDUCATION DEGREE**

(30 semester hours)

(1) Students must complete a 21 semester hour major in either Business Education, Physical and Health Education, or Physics.

(2) Students must complete a 9 semester hour minor in Secondary Education or Higher Education.
REQUIREMENTS FOR A MINOR IN SECONDARY EDUCATION TO ACCOMPANY THE MAT DEGREE
(12 semester hours)

**Semester Hours**

(1) SEED 607  Secondary School Curriculum and Co-Curriculum  3
(2) EDUC 625  Evaluation in Education  
or  EDUC 630  Research Methods in Education  3
(3) A Foundations Elective Selected From:
    EDUC 505  The Role of the School in Society  3
    EDUC 507  Knowledge and Education
    EDUC 603  Philosophy of Education
    EDUC 620  Comparative Education
    PSYC 628  Advanced Adolescent Psychology
(4) A Methods Elective Selected From:
    EDUC 501  Workshop in Education  3
    SEED 533  Teaching Mathematics in the Secondary School
    SEED 536  Teaching in Multi-Ethnic Schools
    SEED 537  Teaching Science in the Secondary School
    SEED 538  Teaching Social Studies in the Secondary School
    SEED 660  Instructional Development in the Secondary School
## REQUIREMENTS FOR A MINOR IN SECONDARY EDUCATION TO ACCOMPANY THE DEGREES OF MASTER OF ARTS IN EDUCATION, MASTER OF SCIENCE IN EDUCATION, MASTER OF MUSIC EDUCATION

(9 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>(1) SEED 607</td>
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(2) A Foundations Elective Selected From:

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<tr>
<th>Course Code</th>
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<tbody>
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<td>EDUC 505</td>
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<tr>
<td>EDUC 507</td>
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<tr>
<td>EDUC 620</td>
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(3) A Methods Elective Selected From:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
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<tbody>
<tr>
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<tr>
<td>SEED 533</td>
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<td>SEED 538</td>
<td>Teaching Social Studies in the Secondary School</td>
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<tr>
<td>SEED 660</td>
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## REQUIREMENTS FOR A MINOR IN HIGHER EDUCATION TO ACCOMPANY THE MAT DEGREE

(12 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>(1) Basic Courses:</td>
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<tr>
<td>EDUC 670</td>
<td>American Higher Education</td>
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</tr>
</tbody>
</table>
EDUC 671  Instructional Techniques in Higher Education

(2) Two Electives Selected From: 6
EDUC 501  Workshop in Education
EDUC 505  The Role of the School in Society
EDUC 507  Knowledge and Education
EDUC 572  Introduction to Adult-Continuing Education
EDUC 603  Philosophy of Education
EDUC 620  Comparative Education
COED 540  Personnel Services in Higher Education
ADSU 644  Administration of School Personnel

REQUIREMENTS FOR A MINOR IN HIGHER EDUCATION TO ACCOMPANY THE DEGREES OF MASTER OF ARTS IN EDUCATION, MASTER OF SCIENCE IN EDUCATION, MASTER OF MUSIC EDUCATION

(9 Semester Hours)

Semester Hours

(1) Basic Courses: 6
EDUC 670  American Higher Education
EDUC 671  Instructional Techniques in Higher Education

(2) An Elective Selected From: 3
EDUC 501  Workshop in Education
EDUC 505  The Role of the School in Society
EDUC 507  Knowledge and Education
EDUC 572  Introduction to Adult-Continuing Education
EDUC 603  Philosophy of Education
EDUC 620 Comparative Education
COED 540 Personnel Services in Higher Education
ADSU 644 Administration of School Personnel

REQUIREMENTS FOR A MINOR IN EDUCATION OF THE GIFTED
(12 semester hours)

(1) PSYC 629 Psychology of the Gifted 3
(2) SEED 570 Curriculum and Methodology for Teaching the Gifted in the Secondary School 3
(3) SPED 520 Field Experience in Teaching the Gifted 3
(4) An appropriate elective selected with the approval of the student's minor advisor. 3

SCHOOL ADMINISTRATION AND SUPERVISION

The Department offers graduate programs in school administration and supervision which are designed to prepare students to serve as either elementary or secondary school principals and which lead to the Master of Education Degree. Courses are offered also to students seeking endorsements as school superintendents, supervisors of instruction, and other administrative and supervisory positions. Students seeking to meet these requirements should confer with the Head of the Department.

The major programs for elementary and secondary school principals require thirty-six (36) semester hours for completion. Students who major in these programs need not elect a minor to complete degree requirements.

In addition to the general requirements for admission to graduate study, applicants for these programs must meet the following requirements:

A. For admission to unconditional graduate studies in these pro-
grams, applicants must have completed three years of successful teaching at the appropriate level (elementary or secondary) as evidenced by a letter from a public school supervisor or administrator acquainted with their work. Conditional admission will be granted to students who are concurrently engaged in teaching at the appropriate level and who supply similar evidence of teaching success. Completion of the degree program will not result in certification by the Virginia State Board of Education as an elementary or secondary principal unless the student has also completed three years of teaching by the time of graduation.

B. Two letters of recommendation from public school personnel must be provided which would indicate potential to function effectively as a school administrator.

In addition to the general degree requirements, candidates for degrees in these programs must hold a Collegiate Professional Certificate with endorsement for the appropriate level, and possess leadership qualities essential to the principalship. Program applicants should schedule an interview with the Department Head.

REQUIREMENTS FOR THE ELEMENTARY SCHOOL PRINCIPALSHIP PROGRAM

Master of Education Degree; Major in School Administration
(36 semester hours)

<table>
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<tr>
<th>Semester Hours</th>
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<tr>
<td>18</td>
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</table>

(1) Administration and Supervision:

| ADSU 640 | The Fundamentals of Educational Administration |
| ADSU 641 | School Law |
| ADSU 642 | School-Community Relations |

(1) Administration and Supervision, cont’d:

| ADSU 647 | The Elementary School Principal |
## ADSU 649 Internship for Principals
Students with limited backgrounds may be required to earn a total of six hours as interns.

## ADSU 650 Supervision of Instruction

### (2) Foundation Areas: 9
- **EDUC 603** Philosophy of Education
- **PSYC 626** Growth and Development During the Elementary Years
- **EDUC 630** Research Methods in Education

### (3) Curriculum and Instruction: 3
- **ELED 609** Elementary School Curriculum

### (4) Electives Selected From: 6
- **EDUC 505** The Role of the School in Society
- **EDUC 507** Knowledge and Education
- **EDUC 611** Educational Change
- **EDUC 620** Comparative Education
- **EDUC 625** Evaluation in Education
- **ADSU 643** School Plant Management
- **ADSU 644** Administration of School Personnel
- **ADSU 645** Educational Finance Management

### (5) Drug Education:
Students must complete a drug education workshop offered by the Secondary Education Department or submit appropriate evidence of having such an experience previously.
# REQUIREMENTS FOR THE SECONDARY SCHOOL PRINCIPALSHIP PROGRAM

Master of Education Degree; Major in School Administration

(36 semester hours)

### Semester Hours

<table>
<thead>
<tr>
<th>(1) Administration and Supervision:</th>
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<tbody>
<tr>
<td>ADSU 640 The Fundamentals of Educational Administration</td>
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<td>ADSU 642 School-Community Relations</td>
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<td>ADSU 648 The Secondary School Principal</td>
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<td>ADSU 649 Internship for Principals (Students with limited backgrounds may be required to earn a total of six hours as interns.)</td>
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<tr>
<td>ADSU 650 Supervision of Instruction</td>
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<td>EDUC 630 Research Methods in Education</td>
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<tbody>
<tr>
<td>SEED 607 Secondary School Curriculum and Co-Curriculum</td>
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<td>EDUC 625 Evaluation in Education</td>
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</tbody>
</table>
SEED 550  Junior High and Intermediate School Education
ADSU 643  School Plant Management
ADSU 644  Administration of School Personnel
ADSU 645  Educational Finance Management

(5) Drug Education:
Students must complete a drug education workshop offered by the Secondary Education Department or submit appropriate evidence of having such an experience previously.

COURSE OFFERINGS

SECONDARY EDUCATION

SEED 533.  Teaching Mathematics in the Secondary School.  (Summer Only) 3 credits.
Individual and group study of content, methodology, and instructional materials essential to the design and implementation of effective instructional programs in modern mathematics.

SEED 537.  Teaching Science in the Secondary School. 3 credits.
Learning principles, curricula, methods of instruction, facilities, equipment, materials, and student evaluation are topics explored in their relationship to the science program of the secondary school.

SEED 538.  Teaching Social Studies in the Secondary School.  (Summer Only) 3 credits.
Designed to assist experienced secondary teachers in the improvement of social studies instruction. Attention is given to innovative programs and materials.

SEED 550.  Junior High and Intermediate School Education. 3 credits.
Introduces in-service teachers to the concept of the junior high, middle school, and intermediate school and to the role of these unique units in American education. Consideration will be given to the philosophy, functions, and total program of these schools, including curriculum, guidance, personnel, plant, and administration.

SEED 552.  Career Education and the Secondary Curriculum. 3 credits.
Designed to provide the preservice and inservice teacher with basic understandings of the essential aspects of career education in the secondary school curriculum.

**SEED 570.** Curriculum and Methodology for Teaching the Gifted in the Secondary School. 3 credits.

The course includes a study of the curriculum and methodology relevant for preparing teachers to function in secondary schools which are provided special learning experiences for gifted students.

**SEED 607.** Secondary School Curriculum and Co-Curriculum. 3 credits.

The principles and forms of curriculum organization with appraisal of such curriculum patterns as the subject-matter curriculum, the correlated, fused, core and experience curriculum are included. Techniques for reorganizing the curriculum; leadership in curriculum development, and participation of teachers in curriculum improvement. Prerequisite: EDUC 360 or equivalent.

**SEED 660.** Instructional Development in the Secondary School. 3 credits.

Provides educators with necessary knowledge to systematically examine instruction in the classroom. Techniques of teaching, planning, and evaluation are emphasized in the course.

**ADMINISTRATION AND SUPERVISION**

**ADSU 640.** The Fundamentals of Educational Administration. 3 credits.

Federal, state and local authority and control of education; problems related to the administration of pupil personnel, teaching personnel, and of the instructional program. An introduction to organizational theory is included.

**ADSU 641.** School Law. 3 credits.

Provides the teacher, the prospective school administrator, and the practicing school administrator with an understanding of the basic essentials of school law. Both national and Virginia situational and case studies are covered.

**ADSU 642.** School-Community Relations. 3 credits.

The relationships which exist among public school administrators, the community, and other social agencies are explored. Specific attention is given to principles and procedures for establishing and maintaining acceptable school-community relations.
ADSU 643. School Plant Management. 3 credits.

Essential aspects of developing and maintaining efficient school facilities. Field activities include blueprint interpretation and on-site inspections.

ADSU 644. Administration of School Personnel. 3 credits.

Concepts associated with effective personnel management are explored in simulated situations. Participant observation techniques are studied.

ADSU 645. Educational Finance Management. 3 credits.

Current practices and techniques for making efficient and effective decisions concerning financial resource management in public schools. Attention is given to a systems approach.

ADSU 646. Economics of Education. 3 credits.

Designed for graduate students interested in economics, public finance and/or educational administration. The student is acquainted with rates of return to educational investment, human capital vs. physical capital investment, education and economic growth, education and poverty reduction, educational expenditure vs. educational productivity, and economic alternatives to financing education.

ADSU 647. The Elementary School Principal. 3 credits.

Relates aspects of public school administration to the unique problems of elementary school administration. Patterns of elementary school organization are studied. The role of the elementary school principal is explored through simulation techniques.

ADSU 648. The Secondary School Principal. 3 credits.

The essential aspects of secondary school administration are identified and explored. Specific attention is given to the role of the secondary school principal as an administrator and instructional leader.

ADSU 649. Internship for Principals. 3-6 credits.

Designed to allow prospective elementary and secondary school principals to gain practical experience in applying educational theory to daily problems encountered by public school principals. Specific activities included in the internship will be determined by the needs of the student. (Amount of credit given will be determined by the amount of experience acquired, but no more than 6 hours can be counted toward a degree program.)

ADSU 650. Supervision of Instruction. 3 credits.

Supervision is viewed as educational leadership in the improvement of instruction. The implications of research on the nature and
scope of supervision are reviewed, current views on cooperative planning of supervisory programs are analyzed, and the improvement of supervisory techniques studied.

**ADSU 651.** Issues and Problems in School Administration and/or Supervision. 3 credits.

Explores a problem(s) or an issue(s) which area administrators and/or supervisors have identified that they wish to study in-depth. *Prerequisite: Approval of the department head.*

**EDUCATION**

**EDUC 501.** Workshop in Education. 3 credits.

Workshop experience relative to the current needs evident in elementary and secondary school programs. *No more than six credit hours earned in workshops in Education may be applied to a major program in Education and no more than three hours may be applied to a minor program in Education.*

**EDUC 505.** The Role of the School in Society. 3 credits.

A study of the forces affecting the organization, administration, curriculum, and other features of the school in the United States today. Particular emphasis is given to current issues and trends in American culture that give direction to school practice.

**EDUC 507.** Knowledge and Education. 3 credits.

An examination of historical and contemporary issues in the epistemology of education, including sources and nature of knowledge, methods of knowing, and implications for modern educational theory and practice.

**EDUC 536.** Teaching in Multi-Ethnic Schools. 3 credits.

Study of selected problems encountered by teachers in multi-ethnic schools. Attention will be given to: (1) human relations activities, and (2) selected resources useful in creating an appreciation of America's ethnic diversity.

**EDUC 540.** Supervising the Student Teacher. 3 credits.

The student teaching experience is explored as a major component of the teacher education program. Specific attention is given to the role of public school personnel in the guidance of the student teacher. (Sections may be designated for elementary or secondary teachers.)

**EDUC 572.** Introduction to Adult/Continuing Education. 3 credits.

Designed to develop an appreciation of the role of Adult Education
The scope, trends and issues in Adult Education, the needs, interests, and characteristic of adults as students will be covered.

**EDUC 603. Philosophy of Education. 3 credits.**
A critical survey of widely recognized theory regarding the nature and purpose of education in the Western World, with special emphasis upon such theory as it bears on and gives direction to educational policy and practice.

**EDUC 611. Educational Change. 3 credits.**
Group behavior, organizational theory, leadership behavior, and the diffusion of innovation are considered in relationship to educational change.

**EDUC 620. Comparative Education. 3 credits.**
A comparison of the educational system and philosophy of the United States with those of specific foreign countries. Although the emphasis is on recent trends and practices, attention is given to the social, economic, and political problems and development which brought about progress.

**EDUC 625. Evaluation in Education. 3 credits.**
Designed to help teachers improve in their construction and use of classroom tests. Particular emphasis will be given to analyzing test results and to investigating newer developments in the evaluation of learning and instructional programs.

**EDUC 630. Research Methods in Education. 3 credits.**
Develops skills, insights, and understandings which will enable the student to become both an intelligent consumer and an intelligent organizer of educational research.

**EDUC 631. Statistical Analysis in Education. 3 credits.**
Examines a variety of elementary and intermediate statistical techniques from both theoretical and practical viewpoints. Computer utilization is integrated throughout the course. Topics covered include correlation and regression, analysis of variance and covariance, partial and multiple correlation, and non-parametric statistics.

**EDUC 670. American Higher Education. 3 credits.**
The objective and organization of prevalent types of institutions are studied. Current problems and issues in American higher education are explored.
EDUC 671. Instructional Techniques in Higher Education. 3 credits.

Instructional practices and themes are studied in relationship to programs in higher education. Attention is given to innovative programs.

EDUC 680. Reading and Research. 3 credits.

Opportunities for directed reading and research in areas of special interest. Reading and Research may be done only in the major field of study. Prerequisites: EDUC 630 or equivalent, and written permission of the adviser and department heads.

EDUC 700. Thesis. 6 credits.
SOCIAL SCIENCE
DR. MORTIMER, Adviser

Madison College offers programs of study leading to the Master of Arts in Education degree with a major in Social Science and a minor in Education. The College also offers a minor in Social Science leading to the Master of Education degree.

Major—21 credit hours required.

CONCENTRATION I

9 credit hours concentration in one Social Science, the field to be selected from: Economics, Political Science, Sociology or Anthropology, and

12 credit hours in at least two Social Science fields other than that of concentration, with subjects to be selected from Economics, Political Science, Sociology, Anthropology, Geography, and courses in Psychology when recommended by the Adviser and the Head of the Department of Psychology.

CONCENTRATION II

9 credit hours concentration in one Social Science, the field to be selected from: Economics, Political Science, Sociology, or Anthropology, and

6 credit hours in one or two Social Science fields other than that of concentration, with subjects to be selected from Economics, Political Science, Sociology, Anthropology, Geography, and courses in Psychology when recommended by the Adviser and the Head of the Department of Psychology, and

6 credit hours in a thesis.

Minor—12 credit hours required.

6 credit hours in each of two Social Science fields, selected from Economics, Political Science, Sociology, Anthropology, Geography, and courses in Psychology when recommended by the Adviser and the Head of the Department of Psychology.
SOCIAL SCIENCE

SOSC 501. Workshop in Social Science. 3 credits.

This course is designed primarily for social studies teachers desiring to work within an interdisciplinary framework on a subject of current need and interest in the social sciences.

SOCIOLOGY, ANTHROPOLOGY, AND SOCIAL WORK

DR. WILLIAMS, Head of the Department

The Department of Sociology offers graduate courses which are designed to broaden the student's knowledge in this field. The minor program in Sociology which is available for those graduate students pursuing the Master of Education degree requires a minimum of twelve (12) semester hours of graduate credit.

In addition, graduate students pursuing the Master of Arts in Education degree with a major in Social Science may concentrate in Sociology. A concentration in Sociology requires nine (9) semester hours of graduate credit or fifteen (15) semester hours, if a thesis is included.

COURSE OFFERINGS

ANTHROPOLOGY

ANTH 544. Graduate Work in Field Archaeology. 3-8 credits.

This course is directed at providing graduate level students with the opportunity to apply advanced procedures of archaeology in a field situation. Efforts will be on the development and implementation of archaeological research designs. Historic and prehistoric interests are accommodated.

SOCIOLOGY

SOCI 640. Seminar in Social Theory. 3 credits.

A review of the history of sociology will offer a frame of reference from which students will study the classical works of a variety of soci-
ologists. This course will also provide the participant an opportunity to explore the works of some leading social philosophers and examine comparative social and behavioral concepts.

**SOCI 670.** Seminar in Social Change. 3 credits.

An analysis is made of the dynamics of social behavior by reference to changes in value orientation, technology, population characteristics, power structure, system of stratification and communication techniques.

**SOCI 680.** Reading and Research. 3 credits.

Opportunity is offered the individual student for reading and research in the areas of sociology which are of special interest to the student. Approval must be obtained from the Head of the Department.

**SOCI 700.** Thesis. 6 credits.

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**SPECIAL EDUCATION**

DR. LUTH, Head of the Department

**SPECIAL EDUCATION, GENERAL**

The Department of Special Education offers a Master of Education degree in Special Education, General. Specific areas of concentration are Emotional Disturbance, Child Development Specialist/Center Based Teacher, and Learning Disabilities. In conjunction with the Departments of Elementary and Early Childhood Education, Psychology, and Secondary Education and School Administration, a minor program for the Gifted is also offered.

**EMOTIONAL DISTURBANCE**

The Emotional Disturbance (Behavior Disorders) program is an eighteen hour concentration within a thirty hour Special Education Major. The thirty hour program will meet Virginia requirements for certification in the area of the emotionally disturbed. Prior to admission into the concentration, students must have completed general and professional education requirements. Graduates will demonstrate competencies necessary to assume professional roles in public schools, detention facilities, institutional programs, etc., for children with behavioral problems.
Included in the eighteen hours of coursework in the concentration is a minimum of 290 contact hours with children identified as having behavior disorders. The remaining twelve credit hours include courses required for certification. The program will focus on developing competencies in data based approaches to behavior and instructional management. Students who have previously completed and received college approval for courses required for certification can substitute departmentally approved electives to complete their thirty hours. Up to six credit hours of electives may be chosen outside of Special Education.

**Semester Hours**

Minimum Requirements 30

1. **Required Courses Sequence:** 18
   - SPED 521 Advanced Study of Children with Behavioral and Emotional Problems 3
   - SPED 641 Analysis and Intervention Strategies for Teaching Children with Behavior Disorders 6
   - SPED 642 Emotional Disturbance Practicum 3
   - SPED 643 Student Teaching—Emotional Disturbance 6
   Other courses as determined by the individual needs of the student and upon approval of the advisor.

2. **Intra-Departmental Electives:** 6-9
   - SPED 505 Psychoeducational Analysis in Special Education 3
   - SPED 512 Behavior Management in the Classroom 3
   - SPED 605 Characteristics of Children with Learning Disabilities 3
   - SPED 630 Advanced Study of the Exceptional Child 3
   Other courses as determined by the individual needs of the student and upon approval of the advisor.
### Inter-Departmental Electives: 0-6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSYC 522</td>
<td>Advanced Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 621</td>
<td>Behavior Dysfunction in School Children</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 628</td>
<td>Advanced Adolescent Psychology</td>
<td>3</td>
</tr>
<tr>
<td>COED 520</td>
<td>Dynamics of Mental Health</td>
<td>3</td>
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<tr>
<td>COED 530</td>
<td>Counseling in Elementary Education</td>
<td>3</td>
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<tr>
<td>COED 601</td>
<td>Counseling Techniques</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 536</td>
<td>Teaching in Multi-Ethnic Schools</td>
<td>3</td>
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<tr>
<td>SPPA 505</td>
<td>Introduction to Communications Disorders</td>
<td>3</td>
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<td>SPPA 540</td>
<td>Language Disorders</td>
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<td>ECED 511</td>
<td>Survey of Early Childhood Education</td>
<td>3</td>
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<td>ECED 541</td>
<td>Working with Parents of Young Children</td>
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<tr>
<td>SEED 552</td>
<td>Career Education and the Secondary Curriculum</td>
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Other courses as determined by the individual needs of the student and upon approval of the advisor.

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**CHILD DEVELOPMENT SPECIALIST/ CENTER BASED TEACHER**

The Child Development Specialist (CDS)/Center Based Teacher (CBT) is a concentration within the Special Education, General, Master's Degree Program. Working in schools and the field (home, agencies, etc.), Child Development Specialists are prepared to coordinate assessment and programming needs of exceptional preschool children. Emphasis is placed on interdisciplinary planning, accountability, and parental involvement. Child Development Specialists are required to complete a program of at least 39 semester hours. The Center Based Teacher is required to complete a 33 semester hour program which emphasizes a center based (school) program. While teaching experience is viewed as desirable, the program is open to students with experience or training in related areas. Internship, while a
required component, may occur as a formal placement by the College or as a result of supervised employment as a Child Development Specialist or a Center Based Teacher. Students are required to complete the described skill sequence as well as elective offerings as designated by the advisor.

**Semester Hours**

Minimum Requirements 39/33

1. **Required Courses Sequence:** 24 or 18

   SPED 516 Assessment of Young Handicapped Children 3

   SPED 517 Method, Materials, and Curriculum for Young Handicapped Children 3

   SPED 622 Design of Preschool Handicapped Individualized Education Programs (IEP) 3

   SPED 624 Developmental Progress Management Systems 3

   *Students must select one of the two following courses:

   SPED 625 Child Development Specialist Internship 12

   or

   SPED 626 Center Based Teacher Internship 6

   Other courses as determined by the individual needs of the student and upon approval of the advisor.

2. **Intra-Departmental Electives** 9-12

   SPED 512 Behavior Management in the Classroom 3

   SPED 514 Seminar in Special Education 3

   SPED 518 Methods and Materials for Teaching Severe, Profound, and Multihandicapped Children 3

   SPED 609 Diagnosis of Learning Disabilities in Children 3

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*Child Development Specialists are required to take SPED 625 in order to meet proposed certification standards. Center Based Teachers are required to take SPED 626 in order to meet proposed certification standards.*
SPED 630 Advanced Study of the Exceptional Child 3
Other courses as determined by the individual needs of
the student and upon the approval of the advisor.

3. Inter-Departmental Electives 3-6

PSYC 522 Advanced Abnormal Psychology 3
PSYC 610 Learning Theories 3
PSYC 619 Seminar in Behavior Modification 3
ECED 541 Working with Parents of Young
Children 3
COED 670 Rehabilitation Counseling: The Severely
Disabled 3
MUED 579 Music for Atypical Children 3
PE 542 Movement Education for Handicapped
Preschool Children 3
SPPA 540 Language Disorders 3
Other courses as determined by the individual needs of
the student and upon the approval of the advisor.

LEARNING DISABILITIES

The purpose of the concentration in Learning Disabilities is to pre-
pare Learning Disability Specialists. Such specialists are trained to serve
as resource teachers, teacher consultants, and special class teachers who
work with learning disabled children. Program graduates will be eligible
for endorsement in Learning Disabilities as specified by the state of
Virginia certification requirements.

The minimum requirement for a concentration in Learning Dis-
abilities is the satisfactory completion of thirty-three (33) semester
hours of prescribed coursework. Applicants should have completed a
minimum of twenty-four (24) semester hours of undergraduate work
in education and/or psychology prior to enrollment. A student may be admitted to the program with deficiencies, but should be aware that he may be required to take appropriate coursework beyond the minimum program requirements. Students without acceptable teaching experience will be required to complete one year of successful teaching before the Master of Education (M.Ed.) degree is conferred.

Students who desire certification to teach the learning disabled in Virginia must qualify for the Collegiate Professional Certificate by satisfying both general and professional education requirements. In addition, they must complete one or more courses in each of the following areas: (1) human growth and development; (2) pupil evaluation; (3) teaching of mathematics; (4) teaching of reading; (5) survey of exceptional children.

Semester Hours

Minimum Requirements 33

1. Required Courses Sequence: 21
   READ 658 Diagnostic and Remedial Techniques in Reading 3
   SPED 605 Characteristics of Children with Learning Disabilities 3
   SPED 609 Diagnosis of Learning Disabilities in Children 3
   SPED 610 Teaching Children with Learning Disabilities 3
   SPED 620 Practicum in Learning Disabilities 3
   SPED 650 Student Teaching in Learning Disabilities 3
   SPED 660 Issues and Trends in Learning Disabilities 3

2. Nine (9) semester hours selected from among the following: 9
   EDUC 501 Workshop: Remedial Arithmetic 3
   PSYC 522 Advanced Abnormal Psychology 3
Semester Hours

PSYC 621 Behavior Dysfunctions in School Children 3
PSYC 626 Growth and Development During the Elementary Years 3
PSYC 628 Advanced Adolescent Psychology 3
SPPA 540 Language Disorders 3

Other courses as determined by the individual needs of the student and upon approval of the advisor.

3. Three (3) semester hours selected from among the following: 3

PSYC 610 Learning Theories 3
PSYC 619 Seminar in Behavior Modification 3
PSYC 648 Research in Human Development 3
SPED 512 Behavior Management in the Classroom 3

Other courses as determined by the individual needs of the student and upon the approval of the advisor.

COURSE OFFERINGS

SPECIAL EDUCATION

SPED 501. Workshops in Special Education. 3 credits.

Designed to provide an intensive study of a particular topic in special education. Prerequisite: SPED 340 and permission, head of department.

SPED 505. Psychoeducational Analysis in Special Education. 3 credits.

A study of curricular adjustment procedures as determined by intellectual, social, emotional, and physical data about the individual. The focus of the course is upon methods of diagnosing the learning strengths and limitations of the individual. Prerequisites: SPED 340, PSYC 488, and/or permission of instructor.

SPED 512. Behavior Management in the Classroom. 3 credits.

An application of behavioral modification techniques to the control of discipline problems in the classroom. The use of these principles as an aid in learning is also stressed.
SPED 514. Seminar in Special Education. 3 credits.

An intensive study of current problems and issues in special education. Prerequisite: SPED 340 and permission, head of department.

SPED 516. Assessment of Young Handicapped Children. 3 credits.

An intensive study of assessment procedures employed with the preschool handicapped child. Emphasis is placed on the use of development-criterion oriented instruments. Students will be required to participate in field-based experiences and competency-based evaluations. Students are required to purchase assessment instruments. Prerequisite: Permission of instructor.

SPED 517. Methods, Materials, and Curriculum for Young Handicapped Children. 3 credits.

Students are trained to implement Individualized Education Programs designed for preschool handicapped children. Modification or adaptation of existing programs is considered. Emphasis is directed toward the integration of materials, equipment, and curriculum for the preschool handicapped. Prerequisite: Permission of instructor.

SPED 518. Methods and Materials for Teaching Severe, Profound, and Multihandicapped Children. 3 credits.

Students are trained in the use of methods and materials effective with severe, profound, and multihandicapping conditions. Particular emphasis is directed toward the provision of a comprehensive educational program required by P.L. 94-142. Prerequisite: Permission of instructor.

SPED 520. Field Experiences for the Gifted. 3 credits.

The purpose of this course is to provide the student with observation and participation experiences with the gifted in educational settings. Prerequisite: Permission of instructor.

SPED 521. Advanced Study of Children With Behavioral and Emotional Problems. 3 credits.

An in-depth study of the following topics: (a) characteristics of children with behavior and/or emotional problems; (b) theories on the development of problem behaviors; (c) non-classroom, classroom, and ancillary therapies; (d) screening and assessment procedures; and (e) community resources.

SPED 605. Characteristics of Children With Learning Disabilities. 3 credits.

A detailed study of the nature and needs of the special learning
disabled child. The focus of the course is on terminology, etiology, characteristics, diagnosis, and special problems.

**SPED 609.** Diagnosis of Learning Disabilities in Children. 3 credits.

A detailed study of screening, assessment, and diagnostic procedures and instruments used in programming for children with learning disabilities. The course emphasizes administration of diagnostic instruments, interpretation of results, and formulation of individual educational plans to ameliorate learning disabilities. A case study approach to diagnosis is used. *Prerequisite: SPED 605, or permission of instructor.*

**SPED 610.** Teaching Children With Learning Disabilities. 3 credits.

A detailed study of curriculum and methods for teaching the special learning disabled child. The course emphasizes programs, class organization, lesson planning, behavior control, curricular materials, and teaching strategies. *Prerequisite: SPED 605.*

**SPED 620.** Practicum in Learning Disabilities. 3 credits.

The purpose of this course is to provide the student with observation and participation experiences, other than student teaching, with learning disabled children in educational and non-educational settings. *Prerequisite: SPED 605.*

**SPED 622.** Design of Preschool Handicapped Individualized Education Programs (IEP). 3 credits.

Students are trained in the procedures used for converting assessment data to Individualized Education Programs (IEP). Particular emphasis is directed toward meeting the comprehensive life needs of severely/profoundly or multihandicapped preschool children. Conformity with current legislation will be stressed. *Prerequisite: Permission of instructor.*

**SPED 624.** Developmental Progress Management Systems. 3 credits.

Students are trained in current administrative, supervisory and evaluative methods employed in program accountability for preschool handicapped children. A case study approach is utilized. The role of interdisciplinary programming is investigated. Simulation and/or field experiences is required. *Prerequisite: Permission of instructor.*

**SPED 625.** Child Development Specialist Internship. 12 credits.

The Child Development Specialist Internship provides a supervised experience directly with preschool handicapped children. The
student is expected to demonstrate competencies in all aspects of programming for the preschool handicapped child. Experiences will be in a center-based and field-based program. Prerequisite: All program coursework; Permission of instructor.

SPED 626. Center Based Teacher Internship. 6 credits.

Students are provided an extended opportunity to demonstrate competencies in a center based program for preschool handicapped children. Emphasis is on a cross-categorical approach. Students are assigned to work in a center based program. Prerequisite: All program coursework; Permission of instructor.

SPED 630. Advanced Study of the Exceptional Child. 3 credits.

An in-depth study of the exceptional child. The focus of the course is upon the medical, social, psychological, and cultural factors which are relevant to an understanding of definitions of exceptionally, incidence, characteristics, and educational and therapeutic issues and problems.

SPED 635. Research Methods in Special Education. 3 credits.

Designed to develop the understandings and skills necessary for the student to become both an informed consumer and intelligent producer of scientific procedures—both group and single subject designs are discussed. Prerequisite: Permission of instructor.

SPED 641. Analysis and Intervention Techniques for Teaching Children With Behavior Disorders. 6 credits.

A survey of assessment, curriculum materials and remediation procedures for classroom academic and behavioral problems. Emphasizes data based instruction and task analysis of problem areas. Assessment and remediation are applied in simulation and practicum activities.

SPED 642. Emotional Disturbance Practicum. 3 credits.

Designed to facilitate generalization of competencies developed in previous coursework. Includes hands-on experience as well as weekly seminars to review and defend teaching decisions.

SPED 643. Student Teaching—Emotional Disturbance. 6 credits.

A supervised experience to enable the student teacher to develop management control over a complete class for children with behavior disorders. A final comprehensive examination will require students to defend their educational decisions and develop educational prescriptions for each student he/she taught.

SPED 650. Student Teaching in Learning Disabilities. 3 credits.

The purpose of directed teaching is to enable the student teacher
to apply, with learning disabled children, the understandings and competencies acquired in the graduate program. **Prerequisite: SPED 610.**

**SPED 660.** Issues and Trends in Learning Disabilities. 3 credits.

A problem solving and professional leadership course dealing with current issues, trends, research and legislation in learning disabilities. Emphasis is placed on the role of the learning disabilities specialist as a catalyst for inservice training in the schools, especially as it affects teachers of mainstreamed learning disabled children. **Prerequisite: SPED 620, or permission of instructor.**

**SPED 670.** Advanced Study of Mental Retardation. 3 credits.

Designed to provide the student with an in-depth analysis of mental retardation as a social phenomenon. The focus in the course is upon the medical, educational, social, and legal aspects of mental retardation.

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**SPEECH PATHOLOGY AND AUDIOLOGY**

**DR. O’HARE, Interim Head**

The Department of Speech Pathology and Audiology offers graduate programs in Speech and Language Disorders and Hearing Disorders. Graduates in these programs are awarded the Master of Science and Master of Education degrees respectively.

**HEARING DISORDERS**

The purpose of the program is to prepare individuals for professional employment in the area of Hearing Disorders/Educational Audiology. To this end, students are provided with the necessary competencies to offer quality services to the hearing impaired. The program offers its graduates a course sequence and practica exposure consistent with the requirements of the State of Virginia for endorsement as a certified teacher of the hearing impaired. Selection of the appropriate elective courses will also permit program graduates to meet the academic requirements for certification in Audiology by the American Speech and Hearing Association and for licensure in Audiology by the State of Virginia.
The minimum requirement for a major in Hearing Disorders/Educational Audiology is thirty-six (36) semester hours of prescribed course work. No more than six (6) semester hours earned in practica related courses may be applied to a student’s thirty-six (36) hour program of study. Students who desire certification as a teacher of the hearing impaired in the State of Virginia must qualify for the Collegiate Professional Certificate. A student may be admitted to the program with deficiencies, but should be aware that he may be required to take appropriate course work beyond the minimum program requirements.

Following are a listing of specific program prerequisites. These prerequisites or their equivalents must be completed:

(1) SPPA 207 Speech Science I: Phonetics; (2) SPPA 208 Speech Science II: Anatomy and Physiology; (3) SPPA 300 Children’s Language; (4) SPPA 301 Audiology; (5) SPPA 318 Aural Rehabilitation; (6) SPED 340 The Exceptional Child.

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SPEECH AND LANGUAGE DISORDERS

The graduate program in Speech and Language Disorders is designed to provide a broad spectrum of academic and professional preparation experiences necessary for the training of specialists to deal with disorders of human communication. Particular emphasis is given to the management of speech and language disorders in the pre-school and school-aged individual. Clinical practice experiences are available in a wide range of professional settings including the Madison College Speech and Hearing Center, various hospital and rehabilitation programs, and the public schools. The academic and training components of the program are consistent with the academic requirements for certification in Speech Pathology by the American Speech and Hearing Association and for licensure in Speech Pathology by the State of Virginia. Students seeking careers in public schools must meet the certification standards required for such endorsement by the State of Virginia. It is recommended that applicants should have completed a minimum of twenty-four (24) semester hours of undergraduate course work in Speech Pathology and/or related areas of study. Students may be admitted with deficiencies but should be aware that they may be required to take appropriate course work beyond the minimum program requirements.

Minimum requirements for a major in Speech and Language Disorders include thirty-six (36) semester hours of prescribed course work. No more than six (6) semester hours earned in clinical practice may be applied to a student's thirty-six (36) hour program of study.
Minimum Requirements

1. Required Courses

SPPA 509 Diagnostic Audiometry-Measurement of Hearing
SPPA 540 Language Disorders
SPPA 570 Selected Clinical Experiences
SPPA 600 Introduction to Graduate Study in Speech Pathology & Audiology
SPPA 605 Physiological and Acoustical Phonetics
SPPA 630 Clinical Aspects of Language: Aphasia and Related Problems
SPPA 655 Advanced Clinical Practice

2. Suggested Elective Courses

SPPA 501 Workshops in Speech Pathology
SPPA 610 Processes and Disorders of Speech Articulation
SPPA 615 Processes and Disorders of Speech Fluency
SPPA 620 Disorders of Speech Resonance
SPPA 625 Voice Disorders
SPPA 635 Audiological Assessment of Children
SPPA 640 Neurologically Based Speech Disorders
SPPA 645 Selected Seminars in Speech and Language Disorders
SPPA 650 Independent Study in Speech and Language Disorders
SPPA 700 Thesis
HEDO 510 Hearing Aids and Amplification Systems
SPPA 501. Workshops in Speech Pathology. 1-3 credits.
Designed to provide a detailed study of a particular topic of interest in speech pathology. Prerequisite: Permission of head of department.

SPPA 503. Seminar in Speech Pathology. 3 credits.
A study of the current trends and issues in speech pathology. Prerequisites: SPPA 214 and permission of instructor.

SPPA 505. Introduction to Communication Disorders. 3 credits.
An introduction to the prevalent types of communications disorders with emphasis in the development of speech and language. A study of the etiologies and characteristics of certain communicative impairments, as well as selected classroom and clinical remedial procedures.

SPPA 509. Diagnostic Audiometry—Measurement of Hearing. 3 credits.
A study of the techniques used to assess auditory function and identify aural and neural disorders. The focus of the course is upon the interpretation of audiometric findings relevant to medical implications and communicological significance. Prerequisite: SPPA 301.

SPPA 540. Language Disorders. 3 credits.
A comprehensive study of the etiology and remediation of language disorders in communicatively-impaired children. Specific diagnostic procedures and remedial models will be included in relation to delayed language development resulting from mental retardation and learning disabilities. Prerequisite: SPPA 300.

SPPA 570. Selected Clinical Practice in Speech Pathology. 3 credits.
Supervised clinical practice with selected types of communication disorders. Areas of concentration will be determined on the basis of student need. Repeatable for credit. Prerequisite: SPPA 370 and/or permission of the instructor.
SPPA 600. Introduction to Graduate Study in Speech Pathology & Audiology. 3 credits.

Focuses on research interpretation both basic and applied; current professional issues, development of skills in diagnostic report writing, professional writing and counseling.

SPPA 605. Physiological and Acoustical Phonetics. 3 credits

Respiratory, phonatory, resonatory and articulatory components of speech output are considered. Theoretical models of speech production and reception are discussed. Prerequisite: SPPA 207.

SPPA 610. Processes and Disorders of Speech Articulation. 3 credits.

Articulatory phonetics, distinctive features and other processes of speech articulation are considered. Emphasis is given to the analysis of articulation problems and specific forms of therapy.

SPPA 615. Processes and Disorders of Speech Fluency. 3 credits.

Theoretical and clinical aspects of stuttering, cluttering and related disorders. Prerequisite: SPPA 315.

SPPA 620. Disorders of Speech Resonance. 3 credits.

The study of cleft palate and other orofacial anomalies and their associated speech disorders. Advanced study in the diagnosis and management of cleft palate speech will be provided.

SPPA 625. Voice Disorders. 3 credits.

The study of laryngeal functions and disorders. In depth study of acoustic and physiologic parameters of the vocal mechanism. Emphasis is given to the diagnosis and management of vocal pathologies.

SPPA 630. Clinical Aspects of Language: Aphasia and Related Problems. 3 credits.

Theoretical, comparative aspects and clinical management of aphasia in children and adults is emphasized. Brain function and language is considered in detail.

SPPA 635. Audiological Assessment of Children. 3 credits.

Comprehensive study of early identification, detailed assessment and management of auditory problems in children. Prerequisite: SPPA 301.

SPPA 640. Neurologically Based Speech Disorders. 3 credits.

Special emphasis is given to speech dyspraxias and dysarthrias.
Diagnosis and management of speech disorders associated with cerebral palsy is stressed. *Prerequisite: SPPA 208.*

**SPPA 645.** Selected Seminars in Speech and Language Disorders. 3 credits.

The course will cover advanced considerations of the diagnostic and management of disorders of human communication. Special topic areas will be determined on the basis of student requests.

**SPPA 650.** Independent Study in Speech and Language Disorders. 3 credits.

Designed to allow the graduate student to pursue independent research under faculty supervision. *Prerequisite: Permission of instructor.*

**SPPA 655.** Advanced Clinical Practice in Speech Pathology. 1-3 credits.

Advanced methods and techniques for the diagnosis and management of children and adults is offered in the form of direct supervised clinical experiences in a variety of professional settings. Repeatable for credit. *Prerequisite: SPPA 570 and/or permission of instructor.*

**SPPA 700.** Thesis. 6 credits.

**HEARING DISORDERS**

**HEDO 505.** Introduction to Hearing Disorders. 3 credits.

An overview of etiologies and diagnosis of hearing-impairment, parent guidance, amplification systems, psychoacoustics, speech and language development, oralism, total communication and educational consideration. *Prerequisite: SPPA 301.*

**HEDO 510.** Hearing Aids and Amplification Systems. 3 credits.

A study of hearing aids and group amplification systems. Topic areas include electronic components, electroacoustic characteristics, hearing aid selection, hearing aid fitting, hearing aid orientation, classroom amplification systems, and troubleshooting. *Prerequisites: SPPA 301, SPPA 318.*

**HEDO 520.** Sign Language and Total Communication. 3 credits.

Designed to teach students to use American Sign Language and total communication. *Prerequisite: Permission of instructor.*

**HEDO 606.** Teaching Speech and Language to the Hearing-Impaired. 3 credits.
Overview of speech and language development for the hearing-impaired. Emphasizes procedures for teaching speech and language skills, to include lipreading and auditory training. **Prerequisite: HEDO 505.**

**HEDO 607.** Psychological and Emotional Problems Related to the Hearing-Impaired. 3 credits.

A detailed study of the nature of hearing impairments and the analysis of the psychological needs and problems of the hearing impaired. Attention is given to diagnosis, definitions, characteristics, placement procedures, guidance and parent counseling. **Prerequisite: HEDO 505.**

**HEDO 608.** Procedures for Teaching the Hearing-Impaired. 3 credits.

A study of the history and philosophy of education for the hearing impaired, including educational objectives, programs, methods and materials. Consideration is given to problems in organization, and to the support and maintenance of programs. Procedures used to teach academic skills and subjects will be explored. **Prerequisite: HEDO 505.**

**HEDO 610.** Advanced Aural Rehabilitation. 3 credits.

A study of aural rehabilitation approaches used with the hearing impaired including auditory, visual and auditory-visual training techniques. Emphasis is placed on the sensory capabilities of the hearing impaired. **Prerequisite: SPPA 318, HEDO 505.**

**HEDO 645.** Seminar in Hearing Disorders. 3 credits.

This course will cover advanced considerations relative to diagnosis and management of individuals with hearing disorders. **Prerequisite: HEDO 505 and permission of instructor.**

**HEDO 655.** Practica with the Hearing Impaired. 1-3 credits.

Supervised practice with the hearing impaired is available in a variety of settings and experience areas. Seminars, scheduled in conjunction with the practica, provide a smooth transition from didactic to experimental knowledge. Repeatable for credit. **Permission of instructor.**

**HEDO 660.** Student Teaching with the Hearing Impaired. 6 credits.

Supervised classroom experiences with hearing impaired children in institutional and public school settings. **Prerequisite: HEDO 505, 606, 607, 608.**

**HEDO 680.** Reading and Research. 1-3 credits.
Designed to allow graduate students to pursue independent study and/or research in the area of hearing disorders under appropriate faculty supervision. *Prerequisite: Permission of instructor.*

**HEDO 700.** Thesis. 6 credits.

### ADDITIONAL COURSES

Included within the graduate offerings of Madison College are several courses designed to meet the specific needs and interests of educators and other professional workers. These courses are generally offered in the summer session, and cannot be applied to degree programs without the permission of the Dean of the Graduate School upon recommendation of the student's major adviser.

**AMST 501.** Workshop in American Studies. 3 credits.

Designed to provide qualified students with the opportunity to explore various topics pertaining to American Studies.

**HUM 501.** Workshop in Humanities. 3 credits.

Designed primarily for humanities teachers who wish to work within an interdisciplinary framework to increase their knowledge and sharpen their skills in various areas of humanistic studies. Topics will vary according to need and interest.
REQUEST FOR GRADUATE APPLICATION MATERIALS

Name (Last) (First) (Middle or Maiden)

Address (Number and Street)

(City) (State) (Zip Code)

When do you plan to begin graduate work at Madison College?

(month) (year)

Which degree program do you wish to enter at Madison?

_____ M.Ed.  _____ M.A.Ed.  _____ M.A.T.

_____ M.A.  _____ M.S.Ed.  _____ M.B.A.

_____ M.S.  _____ M.M.Ed.

If known, list major and/or minor program you are interested in:

Check specific information you desire:

_____ Graduate Catalog  _____ Assistantship Application

_____ Application  _____ Fellowship Application

_____ Part-time Medical Form  _____ GRE Application

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_____ Current Schedule of Classes (For term entering)

Mail To: Dean of the Graduate School, Madison College, Harrisonburg, VA 22801

Phone: (703) 433-6131
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For further information concerning graduate study at Madison College write:

   Dean of the
   Graduate School
   Madison College
   Harrisonburg, Va. 22801

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