North Georgia College

Graduate Bulletin
1989 - 1991
NOTICE OF RESPONSIBILITIES

Institutional
1. North Georgia College does not discriminate on the basis of handicap in violation of Section 504 of the Rehabilitation Act of 1973. This nondiscrimination policy applies to admission or access to, or treatment, or employment in, its programs and activities.
2. No person shall, on the ground of sex, age, creed, race, or national origin, be excluded from participation in or be denied the benefits of any program or activity conducted by North Georgia College.

Student
1. It is important all students note that it is their responsibility to keep themselves apprised of current admission, retention and graduation requirements for their particular degree program. The statements set forth in this catalog are for informational purposes only and should not be construed as the basis of a contract between a student and North Georgia College. The College reserves the right to change any provision listed in this catalog, including, but not limited to academic requirements for graduation, without actual notice to individual students.
2. It is important that all students satisfy their financial obligations to North Georgia College. The College reserves and intends to exercise its right to withhold copies of educational records and/or to disenroll students who owe money to the College.
For clarification of or additional information about any part of this book, please contact the Director of Graduate Studies, North Georgia College, Dahlonega, Georgia 30597 or 404-864-1543.
GRADUATE CALENDAR 1989-1991

Fall Quarter, 1989

September 18 (Monday) ..............Late Advisement, Registration, Pay Fees*
September 19 (Tuesday) ...................First Day of Classes
September 21 (Thursday) ..................Final Day for Changing Schedules
October 23 (Monday) .......................Last Day for Drop with W
October 24 (Tuesday) .....................Mid-term Grade Reports Due
November 3, 6-9 (Friday, Monday-Thursday) .........Winter Advisement
November 6-10 (Monday-Friday) .............Winter Registration
November 11 ..................................Comprehensive Examination
November 23-24 (Thursday-Friday) ..........**Thanksgiving Recess
November 30, December 1-2 (Thursday-Saturday) .........Examinations
December 4 (Monday) ......................Final Grade Reports Due

*Fees must be paid by 5:00 p.m. September 18.
**Thanksgiving recess begins 12:00 noon on Wednesday, November 22.

Winter Quarter, 1990

January 3 (Wednesday) ..............Late Advisement, Registration, Pay Fees*
January 4 (Thursday) .....................First Day of Classes
January 8 (Monday) .......................Final Day for Changing Schedules
January 15 (Monday) .....................Martin Luther King Jr. Day
February 8 (Thursday) ...................Last Day for Drop with W
February 9 (Friday) .......................Mid-term Grade Reports Due
February 9, 12-15 (Friday, Monday-Thursday) ...........Spring Advisement
February 12-16 (Monday-Friday) .............Spring Registration
February 24 ..................................Comprehensive Examination
March 16-17, 19 (Friday-Saturday, Monday) .........Examinations
March 20 (Tuesday) ......................Final Grade Reports Due

*Fees must be paid by 5:00 p.m. January 4.

Spring Quarter, 1990

March 28 (Wednesday) ..............Late Advisement, Registration, Pay Fees*
March 29 (Thursday) .....................First Day of Classes
April 2 (Monday) .........................Final Day for Changing Schedules
May 2 (Wednesday) .......................Last Day for Drop with W
May 3 (Thursday) .........................Mid-term Grade Reports Due
May 4-6 (Friday-Sunday) ..................Parents’ Alumni Weekend
May 7-8 (Monday-Tuesday) ...............Summer Advisement
May 8-9 (Tuesday-Wednesday) ...........Summer Registration
May 11, 14-17 (Friday, Monday-Thursday) ..............Fall Advisement
May 12 ..................................Comprehensive Examination
May 14-18 (Monday, Friday) ..............Fall Registration
June 2 (Saturday) .........................Commencement
June 7-9 (Thursday-Saturday) ..............Examinations
June 11 (Monday) ......................Final Grade Reports Due

*Fees must be paid by 5:00 p.m. March 28.
**Summer Quarter, 1990**

June 19 (Tuesday) ..................Late Advisement, Registration, Pay Fees*
June 20 (Wednesday) ..................First Day of Classes
June 22 (Friday) ..................Final Day for Changing Schedules
July 4 (Wednesday) ..................Independence Day Recess
July 18 (Wednesday) ..................Last Day for Drop with W
July 19 (Thursday) ..................Mid-term Grade Reports Due
July 24-25 (Tuesday, Wednesday) ..................Fall Advisement
July 25-26 (Wednesday, Thursday) ..................Fall Registration
July 28 ..................Comprehensive Examination
August 15-16 (Wednesday, Thursday) ..................Examinations
August 17 (Friday) ..................Final Grade Reports Due

*Fees must be paid by 5:00 p.m. on June 19.

**Fall Quarter, 1990**

September 17 (Monday) ..................Late Advisement, Registration, Pay fees*
September 18 (Tuesday) ..................First Day of Classes
September 20 (Thursday) ..................Final Day for Changing Class Schedules
October 22 (Monday) ..................Last Day for Drop with W
October 23 (Tuesday) ..................Mid-term Grade Reports Due
November 2, 5-8 (Friday, Monday-Thursday) ..................Winter Advisement
November 5-9 (Monday-Friday) ..................Winter Registration
November 10 ..................Comprehensive Examination
November 22-23 (Thursday-Friday) ..................**Thanksgiving Recess
November 29-30, December 1 (Thursday-Saturday) ..................Examinations
December 3 (Monday) ..................Final Grade Reports Due

*Fees must be paid by 5:00 p.m. September 17.

**Thanksgiving recess begins 12:00 noon on Wednesday, November 21.

**Winter Quarter, 1991**

January 3 (Thursday) ..................Late Advisement, Registration, Pay Fees*
January 7 (Monday) ..................Final Day for Changing Schedules
January 21 (Monday) ..................Martin Luther King, Jr. Day
February 7 (Thursday) ..................Last Day for Drop with W
February 8 (Friday) ..................Mid-term Grade Reports Due
February 8, 11-14 (Friday, Monday, Thursday) ..................Spring Advisement
February 11-15 (Monday-Friday) ..................Spring Registration
February 23 ..................Comprehensive Examination
March 15-16, 18 (Friday-Saturday, Monday) ..................Examinations
March 19 (Tuesday) ..................Final Grade Reports Due

*Fees must be paid by 5:00 p.m. January 3.
Spring Quarter, 1991

March 27 (Wednesday) .......... Late Advisement, Registration, Pay Fees*
March 28 (Thursday) .................. First Day of Classes
April 1 (Monday) .................. Final Day for Changing Schedules
May 1 (Wednesday) .................. Last Day for Drop with W
May 2 (Thursday) .................. Mid-term Grade Reports Due
May 3-5 (Friday-Sunday) ................ Parents' Alumni Weekend
May 6-7 (Monday-Tuesday) ................ Summer Advisement
May 7-8 (Tuesday-Wednesday) ................ Summer Registration
May 10, 13-16 (Friday, Monday-Thursday) ................ Fall Advisement
May 11 .................. Comprehensive Examination
May 13-17 (Monday, Friday) ................ Fall Registration
June 1 (Saturday) .................. Commencement
June 6-8 (Thursday-Saturday) .................. Examinations
June 10 (Monday) .................. Final Grade Reports Due

*Fees must be paid by 5:00 p.m. March 27.

Summer Quarter, 1991

June 18 (Tuesday) .................. Late Advisement, Registration, Pay Fees*
June 19 (Wednesday) .................. First Day of Classes
June 21 (Friday) .................. Final Day for Changing Schedules
July 4 (Thursday) .................. Independence Day Recess
July 17 (Wednesday) .................. Last Day for Drop with W
July 18 (Thursday) .................. Mid-term Grade Reports Due
July 23-24 (Tuesday, Wednesday) .................. Fall Advisement
July 24-25 (Wednesday, Thursday) .................. Fall Registration
July 27 .................. Comprehensive Examination
August 14-15 (Wednesday, Thursday) .................. Examinations
August 16 (Friday) .................. Final Grade Reports Due

*Fees must be paid by 5:00 p.m. on June 18.
General Information

Facilities

Financial Aid

Expenses and Fees
GENERAL INFORMATION

History
North Georgia College was founded in 1873 as an agricultural and mechanical college for men and women. At present it is a state-supported, liberal arts, senior college unit of the University System of Georgia under the direction of the State Board of Regents. It is located in Dahlonega, Georgia, on the site of the original U.S. Government Gold Mint. Dahlonega, a town of about 3,000 people, is set in the foothills of the beautiful Blue Ridge Mountains—55 miles/1 hour north of metropolitan Atlanta via Georgia 400. North Georgia College was approved by the Board of Regents of the University System of Georgia to initiate a graduate program for teachers in June, 1974. This approval followed a four-year period of service by the College as a resident graduate center for the University of Georgia. In its approval, North Georgia College was authorized to offer the Master of Education degree in the areas of Early Childhood Education, Elementary Education, Secondary Education, and Special Education. Middle Grades Education was added in 1978.

Statement of Purpose
The objectives of the program are directly related to the goals of North Georgia College as stated in the statutes of the College. More specifically, the program is designed to provide preparation for teachers at the fifth year level, to equip superior graduate students for study at advanced levels, and to provide teachers who do not desire a graduate degree the opportunity to enhance their skills and knowledge. All graduates of the program should be capable of sustained study, possess a relatively broad knowledge of the literature in their area of study, and have a reasonable ability to engage in appropriate research.

Accreditation and Memberships
North Georgia College, as a senior member of the University System of Georgia, is an accredited member of the Association of American Colleges, the Association of Military Colleges and Schools, the Southern Association of Colleges, and the Association of Georgia Colleges. Its work in the field of education is recognized and accredited by the National Council for the Accreditation of Teacher Education and the Georgia State Department of Education. The quality of the training offered in all departments has long enjoyed national recognition. A significant number of its graduates attend graduate and professional schools.
COLLEGE EXPENSES AND FEES*

All fees are payable at the time of registration for each quarter. Registration is not complete until all fees have been paid. All matriculation and other charges are subject to change without notice. Payment may be made either in cash or by check. If a check given in payment of a student's fees, books, or supplies is not paid upon presentation to the bank on which it is drawn, the student will be charged a returned check fee of $15.00 or 5% of the amount of the check, whichever is greater.

Application Fee

ALL APPLICANTS to North Georgia College for graduate studies must submit a ten dollar ($10.00) Application fee with their Application Form before the applicant will be given consideration as a prospective student. The Application Fee is non-refundable and will not apply toward the student's registration fees.

Tuition

The University System of Georgia requires no general tuition fee of students who are legal residents of the State of Georgia, and there is no charge for instruction, except for certain courses requiring instruction on an individual and small-group basis.

Matriculation Fee—Resident Students

Each student is required to pay matriculation fees. A student who is a legal resident of the State of Georgia according to the regulations of the Board of Regents of the University System of Georgia, and who has been a legal resident of the state for at least twelve months preceding the date of his registration must pay resident student fees. These fees are payable in advance at the beginning of each quarter. A full load is 10 or more hours per quarter.

\[
\text{Matriculation Fee} \quad \begin{array}{c}
\text{$320.00$ per full load/quarter or} \\
\text{$32.00$ per quarter hour}
\end{array}
\]

Matriculation and Tuition Fee—Non Resident Students

Each student who has not been legally domiciled in the State of Georgia under the regulations of the Board of Regents for at least twelve months preceding the date of his registration shall pay at the beginning of each quarter the following matriculation and tuition fees:

*All dollar amounts are subject to change without notification.
Matriculation Fee  $320.00 per full load/quarter or  
$ 32.00 per quarter hour  
Tuition—Out-of-State  $640.00 per full load/quarter or  
$ 64.00 per quarter hour  
Total  $960.00 per full load/quarter or  
$ 96.00 per quarter hour  

Students with a teaching contract in Georgia may be eligible for resident status and should contact the Registrar for details.

Student Activity Fee
A student activity fee of $39.00 is charged every student taking six or more hours each quarter. The opportunity for students to enhance their total college environment and more fully appreciate the aesthetics of cultural, religious, social, and athletic participation is an integral part of a sound educational process. Student activity fees are utilized to provide cultural, social and athletic programs for the entire student body. In addition, these fees provide financial support for student facilities at the College, guest speakers and lecturers, student publications, and similar projects which are available for the exclusive use of the students of North Georgia College.

Student Health Fee
A student health fee of $35.00 is charged every student taking six or more hours each quarter. The infirmary is open for student use on a 24 hour a day basis and consultation with a physician is available daily.

Room and Board
Room and board is available at the following rates:
Room  $315.00 per quarter
Board  $360.00 per quarter
Room reservations can be made by submission of a $50.00 deposit.

Late Registrants
A student who fails to register during the period set aside for this purpose will be required to pay a service charge of $5.00 per course.

Transcript Fee
A student who has discharged all financial obligations to North Georgia College is entitled to receive on request and without charge one transcript of his academic record. A charge of $2.00 will be made for each additional transcript.
Graduation Fee

Every student receiving a degree must pay a graduation fee of $35.00 to cover all expenses, including the rental of cap, gown, hood, and the cost of the diploma. Students may procure the necessary forms and pay the graduation fee at the Registrar's office.

Refund of Matriculation Fees

Formal withdrawal must begin with a written approval from the Director of Graduate Studies. At the time this approval is granted, specific instructions will be given for the students to complete his formal withdrawal. Any deviation from this procedure will be considered as an irregular withdrawal and will result in the forfeiture of the refund.

In the case of formal withdrawal, a refund of the matriculation fee may be made on the following basis:

1. Withdrawal during one week following the scheduled registration date; a refund of 80% of the matriculation fee paid for that quarter;
2. Between one and two weeks, 60%;
3. Between two and three weeks, 40%;
4. Between three and four weeks, 20%;
5. After four weeks, no refund.

In case of withdrawal, a refund on board and room may be made on the number of full weeks remaining in the quarter.

In the case of excused absence, a refund on board, not room, may be given on that part of the student's absence which is in excess of two weeks.

FINANCIAL AID

Graduate Assistantships

Assistantships are available in departments offering degrees. Stipends vary, depending upon services rendered. Students interested in such grants may obtain further information by writing the Dean of the College.

Residence Hall Directors

Hall director positions are periodically available to a very limited number of graduate students. Students awarded these positions receive compensation based upon work done and responsibilities. Detailed information regarding positions can be obtained from:

Ms. Frances Saus
Associate Dean of Students
North Georgia College
Dahlonega, Georgia 30597
Loans and Part-Time Employment
North Georgia College participates in the Carl D. Perkins National Direct Student Loan Program. Loan ceilings are $18,000 in the aggregate for graduate students (including any undergraduate loans). If the student enters the teaching field after college and teaches the physically handicapped or children in a defined poverty area, 100% of the loan (plus interest) may be cancelled. Cancellation of the loan (plus interest) takes place at the rate of 15% per year for the 1st and 2nd year, 20% per year for the 3rd and 4th year, and 30% per year for the 5th year.

Part-time positions are available for graduate students. Those interested in loans or part-time employment may obtain detailed information by writing the Director of Financial Aid.

Teachers seeking state grant-in-aid should write: Consultant, In-Service Teacher Education, State Office Building, Atlanta, Georgia 30334.

Veterans Administration Benefits
North Georgia welcomes the opportunity to assist former servicemen and women eligible for benefits under Public Law 894 or Public Law 550 and war orphans eligible for benefits under Public Law 634. The Veterans Affairs Office at North Georgia College provides an advisory service for students eligible for benefits under these laws. Students planning to attend college under these laws should obtain an application from the Veterans Affairs Office at the College. This office will process the application and certify enrollment.

Service-cancelable Loans for Teachers
The Georgia legislature appropriates funds annually to the Georgia Student Finance Authority to provide service-cancelable loans to eligible students as an incentive for increasing teacher manpower in mathematics, science and special education.

Those interested may obtain detailed information by contacting the Director of Financial Aid at North Georgia College.

Regents Opportunity Scholarship
This scholarship program is through the auspices of the Board of Regents of the University System of Georgia. Funds are provided for qualified minority students to pursue a graduate degree. Contact the Director of Graduate Studies for further information.
FACILITIES

Library

Stewart Library, completed in 1971, holds more than 100,000 volumes plus approximately 400,000 units of microtext including daily issues of the New York Times from September 1, 1851 to date, Dissertation Abstracts from 1938 and the complete files and index of the Educational Resources Information Center (ERIC). Subscriptions are maintained to about 900 periodicals including the major educational journals. Interlibrary loan services are also available.

Stewart is the U.S. Government Selective Depository Library for the North Georgia area.

Circulated materials include books, audio-visual equipment, filmstrips, films, documents, clipping and pamphlet files.

The library is open and staff are available 7 days each week of the academic quarter including evenings to 10 p.m. (except Friday and Saturday evenings). Library cards are kept on file at the main circulation desk.

Computer Facilities

As a member of the University System of Georgia Computer Network, North Georgia College has access to the computers at the University of Georgia, Georgia Tech, and Georgia State University. Terminals are readily available to students if they need to access these computers.

A personal computer center for student use is located in the Education Building. In addition, most academic departments have PC’s available to students on a limited basis.

A TI 990/12 computer is currently being used by North Georgia College for administrative applications. This computer can be used as a remote job entry terminal to the facilities provided by the University System Computer Network.

Instructional Media

The Department of Education maintains an instructional media laboratory and a video-tape laboratory. The laboratories exist not only to provide audio-visual equipment, but have trained staff on hand to provide services and consultation for more effective means of instruction.
FACULTY

Facial Recognition: A Case Study

Dr. Jane Doe

Department of Computer Science

University of California, Berkeley

Abstract

The purpose of this study is to investigate the accuracy of facial recognition technology in various scenarios. The research was conducted using a dataset of 10,000 images, including both frontal and profile views. The results show that the technology performs well in controlled environments, but accuracy diminishes significantly in everyday, unconstrained settings.

Introduction

Facial recognition technology has been rapidly advancing in recent years, with applications ranging from security to personal identification services. Despite its promise, the technology still faces challenges in terms of accuracy and reliability, particularly in real-world scenarios.

Methodology

The dataset used for this study consists of 10,000 images, evenly distributed between frontal and profile views. The images were captured under various lighting conditions and background settings to simulate real-world scenarios.

Results

The results indicate that the technology performs with a high degree of accuracy (95%) in controlled environments with clear and focused images. However, the accuracy drops significantly (70%) in everyday, unconstrained settings where lighting and background are unpredictable.

Discussion

The findings suggest that current facial recognition technology is not yet ready for widespread implementation in real-world applications. Further research is needed to address the limitations and improve the accuracy in varying conditions.

Conclusion

Facial recognition technology shows potential but requires significant improvements to enhance its reliability in real-world scenarios. Continued research and development are essential to bridge the gap between theoretical accuracy and practical application.

References


Acknowledgments

The author would like to thank the Department of Computer Science for providing the necessary resources and support for this research.

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Admission
ADMISSION

Requirements
To be admitted, an applicant must hold a bachelor’s degree from an accredited college or university and must meet other admissions requirements as outlined below. The applicant must submit transcripts from all institutions attended prior to North Georgia College, as well as satisfactory test scores on the Graduate Record Exam (GRE), or the Miller Analogies Test (MAT). Scores on admission tests may not be over 5 years old.

Procedure
Application forms may be obtained from the Office of Graduate Studies or the College Admissions Office. The completed form with the $10.00 application fee, transcripts and tests scores should be on file in the Admissions Office at least 20 days prior to the time of enrollment.

If applicants cannot enter the Graduate Studies Program in the quarter indicated on the application form, they should inform the Admissions Office of their plans.

Transfer
Students wishing to transfer into the Graduate Studies Program must become a degree seeking candidate and meet all the requirements of applicants for regular standing. The student may offer in transfer, subject to approval by their advisor and the Director of Graduate Studies, a maximum of 10 hours with grades of “B” or better from an accredited graduate school. This request for transfer of graduate credit must be done in writing by the student through the Office of Graduate Studies. All work, including transfer credit, must be completed within the 6 year period.

Standings

Degree
All students seeking the Master of Education degree at North Georgia College are considered degree students.

A. Regular
A student who has graduated from an accredited institution with a cumulative undergraduate GPA of 2.5 or above, GRE score of 800 or above on the aptitude portion, or a MAT score of 44 or above.

B. Provisional
1. The student must hold an undergraduate degree from an accredited college or university, have earned a cumulative undergraduate GPA of 2.50 or above, and have an undergraduate major in, or prerequisite for the planned field of study where applicable.
2. If a student fails to meet the minimum entrance test requirements for regular admission, the student may be considered for provisional admission if:
   a. The Miller Analogies Test score is ≥ 31.
   b. The Graduate Record Exam score is ≥ 750.

3. If a student fails to meet the minimum GPA of 2.5 then the student may appeal for admission through the office of the Director of Graduate Studies.

4. Students may remain admitted on a provisional basis until they have attempted 15 hours of graduate work. If they satisfactorily complete the initial 15 hours of work with no grade of less than a “B”, they may be admitted to a degree program subject to approval by appropriate college officials.

Non-Degree

All students at North Georgia College taking courses for certification or personal enrichment and not seeking the Master of Education degree are considered non-degree students.

A. Post-Baccalaureate Admission (Definition: The student has applied for admission for the purpose of taking courses for certification or personal enrichment.)
   1. A student in this category must have a baccalaureate degree from an accredited college with a minimum grade point average of 2.0 calculated on all undergraduate work attempted.
   2. If a nondegree student should decide to seek a degree, provisional or regular standing must be met. In such cases no more than 15 hours of credit earned while in non-degree standing may subsequently be applied toward meeting the requirements of a masters’ degree at an institution in the University System.

B. Post-Graduate Admission (Definition: The student, holder of an earned graduate degree, has not applied for another degree program, but wishes to take work for certification or personal enrichment.)
   1. Students in this category must have a graduate degree from an accredited college.
   2. No more than 15 hours of graduate credit earned in this category may subsequently be applied toward meeting the requirements of a graduate degree at an institution in the University System. No credit earned in this classification may be applied to the Specialist in Education degree programs.

ADMISSION TO THE GRADUATE STUDIES PROGRAM DOES NOT IMPLY ACCEPTANCE AS A CANDIDATE FOR A MASTER’S DEGREE.
ADMISSION

Students admitted to the Graduate School must meet the following requirements in addition to those listed under "Admission to The College." Other matters of policy, procedures, and privileges may be determined by the Graduate Studies Committee.

1. All students must satisfy the entrance requirements established by the Graduate School of any university of the University System of Georgia. These requirements are determined by the faculty of the Graduate School.

2. Students must submit an application for admission to the Graduate School. The application should be accompanied by an appropriate fee.

3. Students must provide evidence of sufficient academic preparation to meet the requirements of the program to which they apply. This evidence may include satisfactory scores on the Graduate Record Examination (GRE), the Miller Analogies Test (MAT), or other standardized tests as required by the program to which they apply.

4. Students must maintain a minimum grade point average of 3.0 in all graduate coursework.

5. Students must complete the required courses and pass the final examination or project with satisfactory grades.

6. Students must fulfill any other requirements specified by the program to which they apply.

Declaration: The student must be enrolled in the Graduate School at Georgia Southern University College of Education. The student must also be enrolled in the Graduate School of Education at Georgia Southern University.

F. Graduation Requirements

1. To be considered for graduation, a student must have satisfied all the requirements outlined in the Graduate School of Education. These requirements include the completion of all course work, the successful completion of the final examination or project, and the fulfillment of any other requirements specified by the program to which they apply.
REQUIREMENTS FOR GRADUATE DEGREES

Admission to Candidacy
Admission to candidacy may be granted to any regular graduate student when the following requirements have been met: (1) the student has completed at least 15 quarter hours of acceptable graduate work at North Georgia College; (2) the student has filed in the office of Graduate Studies an application for candidacy/program of study approved by the advisor, the appropriate departmental chairman, the Director of Graduate Studies and the Vice President for Academic Affairs; (3) if applicable, the student has on file an approved plan for thesis or research project.

Students must be admitted to candidacy prior to enrollment in their sixth course. If a student is seeking fifth-year teacher certification then the student should furnish evidence of eligibility for the Georgia T-4 Certificate.

Entrance Tests for Regular Standing
For any applicant one of the following tests is acceptable:
1. The Aptitude Test of the Graduate Record Examination with a minimum score of 800.
2. The Miller Analogies Test with a minimum score of 44.

Academic Performance
A graduate student must maintain a grade point average of 3.0 or better. No grade below a “C” will be accepted toward a degree. The record of any student receiving more than two “C’s” will be subject to review by an ad hoc graduate review committee appointed by the Chair of the Graduate Council and composed of no fewer than three members.

Graduate students whose academic performance is unsatisfactory will be subject to the following:
1. Academic Notice. When any student’s GPA falls below a B average that student will be placed on academic notice until the B average is attained. No student may become a candidate for the degree or take the comprehensive examination while on academic notice.
2. Probation. A student will be placed on probation for either of the following reasons:
   a. The student’s grade point average falls below 2.67 any time after 30 quarter hours have been attempted. (Probation is removed when the GPA reaches 3.0 or higher.)
   b. The student earns one “F”. (Probation is removed when the course or a substituted course, approved by the Director of Graduate Studies, is taken and a grade of “B” or “A” is attained.) No student may be a candidate, or take the comprehensive examination while on probation.
3. Suspension. Any student receiving 2 “F”s” or any 3 grades below “C” will be suspended. No student may enroll in any graduate courses while on suspension. (If suspended, a student may reapply for admission. Readmission is subject to the approval of the Graduate Admissions Committee.)

Program of Study
The Program of Study must be completed and on file in the Graduate Office by the completion of 25 hours of graduate work. If the student is following the program requiring a thesis, the thesis subject must also be submitted for approval.

The Program of Study shall consist of those courses for which graduate credit is granted toward a degree or teacher’s certificate. No changes may be made in the Program of Study, without approval in advance by the Director of Graduate Studies. A memorandum of such changes must be appended to the Program of Study in the candidate’s file.

North Georgia College offers the following degrees in the field of Education:
- Master of Education in Early Childhood Education
- Master of Education, Grades K-12
- Art
- Physical Education
- Master of Education in Middle Grades
- Master of Education in Special Education
- Learning Disabilities
- Mental Retardation
- Behavior Disorders

Master of Education in Secondary Education:
- Biology
- Business Education
- Chemistry
- English
- Mathematics
- Modern Languages
- Science
- Social Science

The Specialist Degree
North Georgia College has been designated as a Residence Center for certain 6th year programs offered by the University of Georgia. For information contact the Director of Graduate Studies.

Course Requirements
The program, planned as a logically organized whole and interrelated with the student’s undergraduate years, will meet the following minimum requirements:

Program Without Thesis. The program without thesis requires a MINIMUM OF 55 QUARTER HOURS OF COURSE WORK, of which at least 25 hours must
be in courses numbered 700 or above. The 55 quarter hours shall be organized in the following manner:

A. Education 700—Foundations of Education ....................... 5 hours*
B. Education 701—Educational Research ............................. 5 hours
C. Education 702—Psychology of Classroom Learning ............. 5 hours
D. Education 713, 734, 773, or Special Education 770 .......... 5 hours
   (Students should take the curriculum course related to their area.)
E. Academic Concentration (Minimum) .............................. 25 hours
F. Elective—(To be chosen from Education or
   Academic concentration) ...................................... 5 hours
G. Elective—(Chosen from Education or
   Academic concentration) ...................................... 5 hours
Total ........................................................................ 55 hours

*Early childhood majors should take Education 727, Trends in Early Childhood.

Program With Thesis. The program with thesis requires a minimum of 45 quarter hours of course work, of which at least 25 hours must be in courses numbered 700 or above. The program with thesis will be organized in the following manner:

A. Education 700—Foundations of Education ....................... 5 hours*
B. Education 701—Educational Research ............................. 5 hours
C. Education 702—Psychology of Classroom Learning ............. 5 hours
D. Education 713, 734, 773, or Special Education 770 .......... 5 hours
   (Students should take the curriculum course related to their area.)
E. Academic Concentration (Minimum) .............................. 25 hours
F. Thesis
   (Students should register for Education 709) .................. 10 hours
Total ........................................................................ 55 hours

*Early childhood majors should take Education 727, Trends in Early Childhood.

Candidates for the M.Ed. degree must meet certain undergraduate and graduate requirements in the teaching area. Since these requirements vary from department to department it will be necessary for the student to plan with an adviser in the department. It is the student’s responsibility to insure that all requirements both undergraduate and graduate have been met. Each department will provide the candidate with a list of requirements upon request.

Thesis

The thesis must embody the results of a study related to the student’s academic concentration. The study must demonstrate the ability to successfully attack a genuine education problem and draw logical and significant conclusions from the data.
Each student undertaking a thesis should register for Education 709. Grading for this course will be done by the student's major professor.

The format of the thesis must conform to the requirements specified by the College.

The candidate must consult with all thesis committee members as the thesis progresses, and suggestions must be incorporated before the final form of the thesis is typed. The final copy of the thesis must be submitted to all members of the examining group not later than one week preceding the date of the thesis examination. Revisions or corrections by the examining committee must be made before acceptance of the thesis becomes final.

**Time Limit, Residence Requirement**

In any graduate program all work submitted for a degree (including the comprehensive examinations) must be completed within a six-year period. It is expected that the student will complete the program with reasonable continuity. Students called into military service, stricken by serious illness, or the like, may apply for an extension of time.

At least half of all coursework must be completed on-campus.

Scores on graduate admission tests may not be over 5 years old.

**Transfer, Extension, Correspondence Credit**

In any graduate program a maximum of 10 quarter hours of graduate credit may be transferred from another accredited institution subject to the following conditions: (1) work already applied toward another degree cannot be accepted; (2) work must have been completed within the six-year period allowed for the completion of degree requirements; (3) work must have been applicable toward a graduate degree at the institution where credit was earned; (4) work offered for transfer must have the approval of the Director of Graduate Studies and the head of the department or advisor of the student's major; (5) acceptance of the transfer credit does not reduce the residence requirement stated above; (6) once enrolled in the NGC graduate program, students desiring to take courses at another institution must apply for transient permission to the Director of Graduate Studies, after securing the written approval of their advisor.

Under no circumstances may credit earned through correspondence work be applied toward satisfaction of degree requirements.

**Transient Students**

A student who has taken work in a college or university may apply for the privilege of temporary registration in North Georgia College. Such a student will ordinarily be one who expects to return to the college or university in which he was previously enrolled.

The following policies shall govern the admission of students on a transient status:

1. The student must apply for admission to North Georgia College.
2. The admissions officer must have evidence that the institution that the student previously attended was an accredited or an approved institution.

3. An applicant will be accepted as a transient student when it appears that the applicant’s previous academic work is of a satisfactory quality. The Director of Admissions may require the applicant to submit a transcript of his previous college work.

4. An applicant for admission as a transient student must present a statement from the dean or registrar of the institution that he last attended recommending his admission as a transient student. Students on academic probation or suspension or on disciplinary suspension will not be admitted.

**Transient Student Permission**

Any student may apply to the Director of Graduate Studies in writing for authorization to complete certain courses in another college or university as a transient student. This application must be approved by the Director of Graduate Studies before enrollment in the course. If an academic major has been chosen, the application must also be approved by the academic advisor concerned. Transient student permission will not be granted to students on academic probation or for the purpose of repeating courses.

**Course Numbers, Load and Schedule**

Courses numbered 700 and above are open only to graduate students. Certain courses devoted to fundamental knowledge carry a 300/400 number of an undergraduate in the senior division and a corresponding 600 number for a graduate student.

A full load for a graduate student is 10-15 hours per quarter. If students are fully employed, they should take only five hours of graduate work during the time of employment. A student on a graduate assistantship may take a maximum of ten hours of graduate work per quarter.

The College makes every effort to maintain the schedule of courses as announced in its bulletin. However, the right is reserved to withdraw courses, change instructors, or change the schedule of classes at any time without previous announcement.

All students should be careful not to enroll in courses which they have previously taken. The final responsibility for non-duplication of courses rests with the student.

**Grading System**

All institutions of the University System of Georgia shall be on a 4.0 grade point average system. The following grades are approved for use in institutions of the University System of Georgia and are included in the determination of the grade point average:
A — Excellent
B — Good
C — Satisfactory
D — Passing
F — Failure
WF — Withdrawn, failing

The following grading symbols are approved for use in the cases indicated, but will not be included in the determination of the grade point average.

I — This symbol indicates that a student was doing satisfactory work but, for non-academic reasons beyond the student’s control, was unable to meet the full requirements of the course. If an “I” is not satisfactorily removed within two quarters, the symbol “I” will be changed to the grade “F” by the appropriate official.

W — This symbol indicates that a student was permitted to withdraw without penalty. Withdrawals without penalty will not be permitted after the mid-point of the total grading period except in cases of hardship as determined by the appropriate official of the respective institution.

V — This symbol indicates that a student was given permission to audit this course. Students may not transfer from audit to credit status or vice versa.

Teacher Certification
Teacher certification is a complex process. If students work closely with their advisors in establishing and implementing their Program of Studies, difficulties regarding State certification can be kept to a minimum. However, if the student does not hold a teaching certificate additional work will be required. Questions should be referred to the Director of Graduate Studies or to the Head of the Department of Education.

The Off-Campus Program
North Georgia College provides graduate courses in a number of locations throughout the Northeast Georgia area. Off-Campus sites may vary from quarter to quarter, but every effort is made to provide the graduate student the convenience of taking courses at locations in or near their home community. Students are allowed to take up to one-half of their course work at off-campus locations. Costs for off-campus courses are slightly higher than for on-campus courses.

Advisers
The Director of Graduate Studies in Education is the general adviser for all graduate students, but, so far as particular courses are concerned, a student is counseled by the head of the major department or by professors appointed as academic advisers for each student. A new student seeking an adviser should report to the Director of Graduate Studies, who will assign the student to a particular adviser.
The adviser is expected to provide the graduate student with a list of courses required for graduation. At the time of each registration, the adviser should approve the student’s program of study for that quarter.

Faculty Committees
For students admitted to candidacy in programs requiring a thesis, an advisory committee is appointed by the Director of Graduate Studies. The chairman shall come from the academic Department concerned, with the remaining two members coming from the Department of Education. The chairman serves as the major professor for work on the thesis, but the candidate is expected to consult regularly with all members of the committee while the work is in progress. The thesis defense is conducted by the student’s committee.

Students who are candidates in the program not requiring the thesis will be advised only by their major professor until they reach the point of taking their comprehensive examinations. At this time the major professor will choose two additional faculty members and form a committee to administer the area examination. The committee must be approved by the Director of Graduate Studies. The core comprehensive examination is required of all candidates and is administered by the Director of Graduate Studies.

Change of Program
Before a graduate student may transfer from one degree program to another, he must submit his request in writing to the Director of Graduate Studies. This request must then be approved by the new major department and the Director of Graduate Studies. Unauthorized changes may result in additional degree requirements.

Comprehensive-Final Examinations
Comprehensive-final examinations are required for all candidates for a graduate degree. The core comprehensive examination will evaluate the required education courses. The area comprehensive examination will evaluate the content courses. The following regulations govern the administration of the comprehensive examinations:
1. The student must be registered when taking the core and/or the area examination.
2. Students must apply with the Director of Graduate Studies to be permitted to take the core examination and with the appropriate advisor to take the area examination.
3. Each student is required to take an examination. Whether it is oral and/or written is determined by the student’s major department.
4. The area examinations are administered by the committee comprised of the major professor and two or more additional faculty members. The committee must be approved by the Director of Graduate Studies.
5. The area examination covers all work prescribed by the student’s program of work, including transferred work, and, if applicable, the thesis or research project.

6. The core comprehensive examination is required for all candidates and is administered by the Director of Graduate Studies.

GRADUATION

Students who finish all degree requirements in the summer or fall must apply for graduation at the Registrar’s Office during the first week of their final quarter. Students finishing the winter or spring quarter must apply for graduation during the first week of the winter quarter. The fee will be submitted to the Registrar of the College. Students are expected to attend the graduation exercises at which their degree is to be conferred. No students will be issued diplomas or transcripts of credits if they are in default of any payments due the College.
The course of study, examination, and final examination shall be under the supervision of the Director of Graduate Studies. The Director of Graduate Studies and the appropriate department concerned, with the consent of the faculty members coming from the Department of Education, The other University departments, and the Graduate School of Education. The course of study, examination, and final examination shall be supervised by the Dean of the Graduate School. The course of study, examination, and final examination shall be supervised by the Director of Graduate Studies. The course of study, examination, and final examination shall be supervised by the Director of Graduate Studies. The course of study, examination, and final examination shall be supervised by the Director of Graduate Studies.

Changes of Program

Before a graduate student may transfer from one degree program to another, he must submit his request in writing to the Director of Graduate Studies. The request must then be approved by the new major department and the Director of Graduate Studies. Unauthorized changes may result in invalidation of degree requirements.

Comprehensive-First Examinations

Comprehensive-examinations are required for all candidates for a Master's degree. The core comprehensive examination will evaluate the student's education courses. The core comprehensive examination will satisfy the general courses. The following regulations govern the administration of the comprehensive examinations:

1. The student must be registered when taking the core and/or the area comprehensive examinations.

2. Students must apply with the Director of Graduate Studies to be approved for the core examination and with the appropriate advisor to be approved for the area comprehensive examinations.

3. Students must take the comprehensive examination. Whether it is oral and/or written, is determined by the student's major department.

4. The comprehensive examination is administered by the committee comprised of the student's advisor and two or more additional faculty members. The comprehensive examination is approved by the Director of Graduate Studies.
Program Check List
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Filing Date</th>
<th>Availability of Forms</th>
<th>Submit to</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Admission to regular standing.</td>
<td>At application. (After 15 hours for Provisional and Post Baccalaureate.)</td>
<td>Director of Graduate Studies</td>
<td>Registrar's Office (Provisional and Post-Bac. submit to Dr. Graduate Studies)</td>
</tr>
<tr>
<td>2. Selection of Major Professor or Committee upon acceptance into Graduate Program</td>
<td>As soon as possible after admission.</td>
<td>Director of Graduate Studies</td>
<td>Director of Graduate Studies</td>
</tr>
<tr>
<td>3. Completion of Program of Studies/Admission to Candidacy for the Master's Degree.</td>
<td>Upon Completion of 15 hours and before completion of 25 quarter hours.</td>
<td>Graduate Office</td>
<td>Graduate Office</td>
</tr>
<tr>
<td>4. Request for transfer of graduate credit earned in another school. (No work will be transferred unless student makes a formal request.)</td>
<td>Immediately after student is admitted to candidacy for the degree.</td>
<td>Graduate Office</td>
<td>Student's Major Professor</td>
</tr>
<tr>
<td>5. Plan with Major Professor and Committee on Research, if thesis program is chosen.</td>
<td>Immediately after student's Major Professor or Committee is appointed</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>6. Application for Comprehensive Examination</td>
<td>First week of final, or next to final, quarter of course work.</td>
<td>Graduate Office for core, advisor for area</td>
<td>Graduate Office for core, advisor for area</td>
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</table>
### Check List

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<tbody>
<tr>
<td>7. Order Cap and Gown.</td>
<td>Summer &amp; Fall Quarters: during the first week of the quarter. Winter &amp; Spring Quarters: during the first week of Winter quarter.</td>
<td>Registrar’s Office</td>
<td>Registrar’s Office</td>
</tr>
<tr>
<td>8. Pay diploma Fee.</td>
<td>Last week of last quarter of course work.</td>
<td>Registrar’s Office</td>
<td>Registrar’s Office</td>
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<tr>
<td>9. If under Thesis Program, thesis</td>
<td>At least 20 days before degree is conferred.</td>
<td>Director of Graduate Studies</td>
<td>Director of Graduate Studies</td>
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<tr>
<td>with signed approval forms and receipt for thesis binding.</td>
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<tr>
<td>10. Take final oral and/or written examination.</td>
<td>At least 20 days before degree is conferred.</td>
<td>Director of Graduate Studies will set date, time, place, and notify student of results of core examination. Adviser does same for area.</td>
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Course Descriptions
BIOLOGY

M.Ed. in Biology
Requirements

Persons who pursue the graduate program in Biology should normally have an undergraduate background in the Biological Sciences equivalent to the Major in Biology-Secondary Education curriculum as listed in the most recent North Georgia College Catalog. Other requirements are found in various sections of the Graduate Bulletin. The 25 to 30 hours graduate level Biology should consist of a broad coverage of the area or select courses designed to complement an individual’s specific background or objectives.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL— 601</td>
<td>Plant Taxonomy</td>
<td>5 hrs</td>
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<tr>
<td></td>
<td>Prerequisites: Biology 221 and 222 or by permission of the Head of the Department. An introductory plant taxonomy course utilizing the spring wild flowers of North Georgia to treat the principles of systematics, nomenclature, classification, phylogenetic relationships and collecting techniques. Four lectures, and one two-hour laboratory period per week.</td>
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<tr>
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<tbody>
<tr>
<td>BIOL— 610</td>
<td>Human Form and Function</td>
<td>5 hrs</td>
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<tr>
<td></td>
<td>Prerequisites: Biology 105 and 106. A human anatomy and physiology course designed for physical education majors, open to early childhood and middle grades education majors. Deals with human organ systems in relation to activity and health. Laboratory study employs a systems approach using models, charts, and dissections. Four hours of lecture and one two-hour laboratory per week.</td>
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<tr>
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<tbody>
<tr>
<td>BIOL— 615</td>
<td>Seminar in Teaching of Biology</td>
<td>5 hrs</td>
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<td></td>
<td>Prerequisites: Ten hours of introductory level college biology plus a minimum of three 200-400 level biology courses or permission of instructor. A seminar in techniques and procedures for illustrating central concepts in Biology. A survey of history of science education and a consideration of modern perspectives in biology are also included. This course is required for secondary education majors in biology but is also available to all who wish to gain insight into teaching in the biological sciences. The course meets five hours per week.</td>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIOL— 620</td>
<td>Genetics</td>
<td>5 hrs</td>
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<tr>
<td></td>
<td>Prerequisites: Biology 105/106 and 107, or by permission of the Head of the Department. A study of the principles of heredity in plants and animals, with applications to human heredity. Four lectures and one two-hour laboratory period per week.</td>
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<tbody>
<tr>
<td>BIOL— 623</td>
<td>Parasitology</td>
<td>5 hrs</td>
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<td></td>
<td>Prerequisites: Biology 225 or permission of the Head of the Department. The course will include a detailed study of the nature of parasitism, the classification, morphology and life histories of animal parasites, the epidemiology, pathology and treatment of parasitic diseases of man, domestic animals and other selected hosts. Three hours of lecture and two two-hour laboratory periods per week.</td>
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<tr>
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<tbody>
<tr>
<td>BIOL— 624</td>
<td>Introductory Microbiology</td>
<td>5 hrs</td>
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<td></td>
<td>Prerequisites: Biology 221 and two courses in Chemistry or by permission of the Head of the Department. An introduction to the principles of microbiology, utilizing the micro-organisms to facilitate an understanding of the life processes. The course is designed for Biology majors and students in pre-professional medical programs. The laboratory phase includes exercises to develop proficiencies in the microbiological techniques. Four lectures and one two-hour laboratory period per week.</td>
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<th>Hours</th>
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<tbody>
<tr>
<td>BIOL— 626</td>
<td>Ecology</td>
<td>5 hrs</td>
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<tr>
<td></td>
<td>Prerequisites: Four courses in Biology or by permission of the Head of the Depart-</td>
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ment. A study of plants and animals in their relations to each other and to the physical and chemical factors of the environment. Four lectures and one three-hour laboratory period per week.

**BIOL—** Cell Biology  630  5 hrs
Prerequisites: Two upper level Biology courses and two courses in Chemistry or by permission of the Head of the Department. An integrated approach to the biochemistry, physiology, and morphology of the plant, animal and prokaryote cell. Topics include: cell architecture, transduction, regulatory and feedback pathways, organogenesis, membrane biogenesis; and, the methods and special problems encountered in studying these phenomena. Additional topics include: viroids and viruses, bacteria and plasmid technology, intracellular parasitism and symbiosis, specialized cells, antibody formation, hybridomas, and cancer cells. Four lectures and one two-hour laboratory per week.

**BIOL—** Immunology  640  5 hrs
Prerequisites: Biology 280 or 324 and two courses in chemistry or by permission of the Head of the Department. An introduction to the principles of immunology to include: structure and function of the cells participating in the immune responses, structure and biology of antigens, anti-bodies, and lymphokines. Additionally, hypersensitivity, autoimmunity molecular recognition at cell surfaces, and immunopathology will be treated. Laboratory exercises will demonstrate the basic antigen, anti-body reactions, antibody titering, and the principles of diagnostic immunology. Four lectures and one two-hour laboratory period per week.

**BIOL—** Evolutionary Biology  645  5 hrs
Prerequisites: Four courses in biology or by permission of the Department Head. A study of the principles of evolutionary biology, beginning with a historical review showing how evolutionary ideas became possible with the growth of biological knowledge. Other topics include: The mechanisms of evolution as a process affecting contemporary organisms including humans, evidence for evolution, evolutionary theories, the early evolutionary history of life on earth, and human evolution. Five lectures per week.

**BIOL—** Physiology  650  5 hrs
Prerequisites: Biology 225 or 226 or 250-251, or by permission of the Department Head. This course explores in detail the functions of tissues, organs, and organ systems with emphasis on mammalian physiology. Some comparisons are made with representatives of other animal groups. Laboratory exercises include an introduction to techniques in physiological measurement and data interpretation. Four lectures and one two-hour laboratory per week.

**BIOL—** Marine Biology  660  5 hrs
Prerequisites: Biology 225, Biology 326, or by permission of the Head of the Department. This course covers basic principles of marine biology with particular emphasis on the marine communities of the Georgia coast. The course will begin with a brief study of physical and chemical oceanography. This will be followed by a description of the ecology of the major marine habitats. Students will become familiar with the flora and fauna of marine communities during a four-day field trip to the Georgia coast, and a three-day field trip to the Florida coast. Participation in these trips is mandatory for successful completion of the course requirements. Five lectures per week.

**BIOL—** Animal Histology  670  5 hrs
A study of selected tissues in the organ systems of vertebrates. Laboratory work involves the microscopic study of mammalian tissues. In addition, each student will use a number of histological techniques to prepare a series of animal tissue slides. Three lectures and two two-hour laboratory periods per week.

**BIOL—** General Embryology  680  5 hrs
Prerequisites: Biology 226. A study of the germ cells and early development stages of vertebrates. Emphasis is placed on organology of the chick, pig, and man. Three lectures and two two-hour laboratory periods per week.

**BIOL—** Man and the Environment  700  5 hrs
A study of the fundamentals of ecology with emphasis upon man's interaction with the natural world. The fundamentals will be used to analyze environmental problems and their implications for the human future. Projects will individualize the course according to student need, interest and expertise.
BIOL— Teaching Strategies for Middle and Secondary School Science
Teachers 5 hrs
This course has as its primary objective the assisting of individuals working to improve their teaching of science. The format of the class will include discussion, lecture, and practice of teaching techniques.

BIOL— Field Zoology 5 hrs
A study of the general biology and ecology of the local fauna with emphasis on field identification.

BIOL— Curriculum Planning in Science 5 hrs
This course includes a study of factors which influence science instruction in today's schools. Historical, psychological, social, philosophical, and practical concerns will be addressed and considered in the processes of selecting and developing curriculum materials.

BIOL— Field Botany 5 hrs
A study of the general biology and ecology of the local flora with emphasis on field identification.

BIOL— Advanced Invertebrate Zoology 5 hrs
Prerequisites: Biology 225 or permission of the Head of the Department. The morphology, physiology, and evolutionary relationships of non-vertebrate animals will be examined. Laboratory exercises will be designed to familiarize teachers with culture methods, experiments, and demonstrations that could be used in their classes. Local sources of living animals will be demonstrated through field trips. Three lectures and on two-hour laboratory period per week.

BIOL— Vertebrate—Zoology 5 hrs
A survey of the taxonomy of vertebrate groups from fishes through mammals, with attention to basic organization and function, ecology, and evolutionary relationships. Select groups will be considered in terms of life history, behavior, and population patterns.

BIOL— Plant Ecology for Teachers 5 hrs
This course introduces the teacher to subject matter in plant ecology that is appropriate for use in middle and secondary school science courses. A lecture/laboratory/field format will be employed.

BIOL— Independent Study in Biology 5 hrs

BUSINESS EDUCATION

BADM— Intermediate Macro Economic Analysis 5 hrs
Prerequisites: BADM 151 and 152. An intensive study of the measurement, analysis, and control of aggregate economic activity. The economic principles underlying national income, business cycles, and growth are examined; and particular attention is given to problems involved in formulating economic policies.

BADM— Intermediate Micro Economic Analysis 5 hrs
Prerequisites: BADM 151 and 152. An intensive study of price theory and its uses. Specific topics covered include the theory of demand, the theory of the firm, pricing in competitive and monopolistic markets, and the pricing of economic resources.

BADM— Money and Banking 5 hrs
Prerequisites: BADM 221. A study of the basic principles and concepts of money and credit and their importance in the present economy. The major topics emphasized are the key role of the commercial banking system in our economy, central banking as a means of expanding and stabilizing the supply of money and credit, monetary theory, monetary and fiscal policies, international banking and finance, and other banking and credit institutions.

BADM— Labor Economics 5 hrs
Prerequisites: BADM 221 and 222. A study of the origin of the labor movement; population and labor force; organized labor; union organization and management; collective bargaining; and the problems of unemployment, full
employment, wage theory and policies, and labor legislation.

BADM— Financial Accounting, 5 hrs
631 I, II, III
632 Intermediate Financial Accounting,
633 I, II and III examines generally accepted principles of accounting for assets, liabilities and capital along with the implication for revenues and expenses. Authoritative literature is introduced. Additional specialized topics include leases, pensions, price-level changes and financial statement analysis. The courses are offered in sequence starting with the Fall quarter.

BADM— Federal Income Taxation 5 hrs
635 This course is an introduction to the taxation of individuals and the fundamen-
tal tax provision applicable to all taxable entities. These provisions include the revenue, gain and loss recognition, tax basis, capital gains and business expense.

BADM— Cost Accounting 5 hrs
636 A study of manufacturing costs and cost accumulation systems. Job order, process and standard cost systems are examined.

BADM— Managerial Accounting 5 hrs
637 Prerequisites: BADM 231 and 232. A study of the use of accounting as a tool in the decision making process. Major topics covered including budgeting, gross profit, and break-even and cost profit-volume analysis, capital expenditures, and internal profit measurement.

BADM— Auditing 5 hrs
638 This course is a study of the principles and theory of the attest function of accounting applied internally and externally. Internal control systems and the review of authoritative professional literature are emphasized.

BADM— Risk and Insurance 5 hrs
641 Prerequisites: BADM 221 or permission of instructor. Studies the nature of risk and the role of insurance in risk management from individual and business viewpoints by considering insurance carriers, contracts, underwriting, and regulation.

BADM— Real Estate 5 hrs
642 A study of the concepts, principles, practices, and laws relating to acquiring, holding, utilizing, and disposing of real property.

BADM— Corporate Finance 5 hrs
644 Prerequisites: BADM 221 and 222. A study of financial organization and management from the standpoint of the chief financial officer of an operating business. Major topics emphasized are choosing a form of organization, planning and managing assets, planning the financial structure, managing short- and long-term funds, and valuing business enterprises.

BADM— Public Finance 5 hrs
646 Prerequisites: BADM 221 and 222. A study of the principles and techniques of government debt; specific tax and non-
tax revenues; and expenditures at the national, state, and local levels.

BADM— Quantitative Methods II— 5 hrs
653 Statistical Analysis for Business
A course in statistical methods with special reference to economic and business applications. Topics include probability distributions, sampling and hypothesis testing, statistical decision theory, regression and correlation, time series and trend, and index numbers.

BADM— Quantitative Methods I— 5 hrs
654 Mathematical Analysis for Business
An introductory course in quantitative methods and concepts used as an aid in the analysis of business problems for decision making. A brief review of relevant mathematical subjects is con-
ducted. Topics include decision models under conditions of uncertainty, linear programming, forecasting techniques, CMP, PERT, Monte Carlo simulation, and others.
<table>
<thead>
<tr>
<th>BADM—</th>
<th>Human Resources Management</th>
<th>5 hrs</th>
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<tbody>
<tr>
<td>665</td>
<td>A study of the principles and procedures of the recruitment, selection, and placement of a labor force. Treatment of grievances, problems of collective bargaining, compensation policies, merit rating, promotion, transfer and discharge, training and personal records are emphasized.</td>
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<tr>
<th>BADM—</th>
<th>Retailing Management</th>
<th>5 hrs</th>
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<tr>
<td>666</td>
<td>A study of the organization, planning, policies, procedures problems, and controlling of the various types of retailing institutions. The major topics emphasized include the selection of retailing locations; organization of retailing services; and the selection, training, compensation and supervision of retailing personnel.</td>
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<tr>
<th>BADM—</th>
<th>Principles of Advertising</th>
<th>5 hrs</th>
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<tr>
<td>672</td>
<td>A study of planning, organizing, and controlling involved in the management of the advertising function of business. Major consideration is given to budgeting for advertising, advertising research, media selection, preparation of advertisements, services of advertising agencies and the economic and social effects of advertising.</td>
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<tr>
<th>BADM—</th>
<th>Principles and Problems in Business Education</th>
<th>5 hrs</th>
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<tr>
<td>701</td>
<td>Principles of business education in relation to the contemporary problems that face business teachers in the secondary school.</td>
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<tr>
<th>BADM—</th>
<th>Problems in Teaching Basic Skill Courses</th>
<th>5 hrs</th>
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<tbody>
<tr>
<td>702</td>
<td>The theory and psychological principles of skill building and evaluation.</td>
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<tr>
<th>BADM—</th>
<th>Problems in Teaching Basic Business Courses</th>
<th>5 hrs</th>
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<tbody>
<tr>
<td>703</td>
<td>Teaching procedures, materials, standards and evaluation in teaching bookkeeping, management, economics and related courses in the secondary school.</td>
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<tr>
<th>BADM—</th>
<th>History and Philosophy of Vocational and Business Education</th>
<th>5 hrs</th>
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<tbody>
<tr>
<td>705</td>
<td>This course is designed to acquaint students with the philosophy and principles of vocational education in general and vocational business education specifically; federal financial support and other encouragement; organization, administration, and supervision of vocational education.</td>
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<tr>
<th>BADM—</th>
<th>Economics for High School Teachers</th>
<th>5 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>720</td>
<td>Develops the content, teaching, and application of economics to citizen needs for teachers who desire an understanding of general economics in the public school curriculum.</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BADM—</th>
<th>Economics for Elementary and Middle School Teachers</th>
<th>5 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>721</td>
<td>Develops the content, teaching, and application of economics for teachers who desire an understanding of general economics in the K-8 public school curriculum.</td>
<td></td>
</tr>
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<thead>
<tr>
<th>BADM—</th>
<th>Consumer Economics</th>
<th>5 hrs</th>
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<tbody>
<tr>
<td>722</td>
<td>This course is designed for teachers and those students who desire a detailed study of consumer problems. The more important elements of consumer education are reviewed, including consumer goods, consumers’ services, buying problems, consumer organization, problems of personal finance, and well-balanced spending programs.</td>
<td></td>
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</tbody>
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<tr>
<th>BADM—</th>
<th>Theory of Accounting</th>
<th>5 hrs</th>
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</thead>
<tbody>
<tr>
<td>739</td>
<td>A study of accounting thought to include both financial and cost accounting theory. Topics of historical significance as well as current problems will be examined.</td>
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</tbody>
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<thead>
<tr>
<th>BADM—</th>
<th>Independent Study in Business Education</th>
<th>5 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>780</td>
<td>The study of a topic or a problem in business education significantly related to the student's interest. (With approval of the student's advisor.)</td>
<td></td>
</tr>
</tbody>
</table>
CHEMISTRY

CHEM— History of Chemistry and Chemical Literature 5 hrs
600
The historical development of modern theories in chemistry will be examined. The chemical literature as an aid in teaching will be examined. In addition, sources of teaching aids such as films and literature will be discussed.

CHEM— Chemical Process 5 hrs
601
A discussion of important inorganic industrial processes. This course will also include discussion of such everyday operations as photography, leaches, detergents, and dyeing. Four hours of lecture and one laboratory period per week.

CHEM— Chemistry and the Environment 5 hrs
602
A comprehensive discussion of the effects of chemical technology on our environment and of the effect of this technology on our standard of living. Four hours of lecture and one laboratory period per week.

CHEM— Introduction to Biochemistry 5 hrs
611
Prerequisite: Chemistry 230 or 331. This course discusses intermediate metabolism and the various classes of compounds involved in those transformations. Four lectures and one laboratory period per week.

CHEM— Inorganic Chemistry 5 hrs
621
Prerequisites: Chemistry 340 or 341. An extension of the study of inorganic chemistry begun in general chemistry. The current theories of atomic structure and bonding in complex ions, crystal systems, and some descriptive inorganic chemistry will be discussed. Four lectures and one laboratory period per week.

CHEM— Organic Chemistry 5, 5 hrs
631, 632, 633
Prerequisite: Chemistry 123. These courses are designed to introduce the student to functional groups and their interconversion, the mechanism of chemical reaction, conformational analy-
sis, and stereochemistry. The Third quarter includes an introduction to carbohydrates and amino acids, kinetic methods and an introduction to problems of organic synthesis.

CHEM— Physical Chemistry 5 hrs
640
This course is a non-calculus introduction to physical chemistry. Emphasis is placed on the application of physical chemical principles to the life sciences. Four lectures and one laboratory period per week.

CHEM— Physical Inorganic Chemistry 5 hrs
721
A comprehensive application of modern theories and of thermodynamics to periodicity and to chemical reactions.

CHEM— Introduction to Organic Analysis 5 hrs
730
Prerequisite: Two quarters of organic chemistry or permission of Department Head. The course will be devoted to qualitative organic analysis and will be an extension of the identification done as part of the laboratory work of the basic year course in organic chemistry. Instrumentation such as the infrared spectrophotometer, ultraviolet spectrophotometer, the gas chromatograph, and other tools will be used to accomplish the stated objectives. Four hours lecture, and one laboratory period per week.

CHEM— Advanced Organic Chemistry 5 hrs
731
The use of chemical reactions in synthesis. A survey of industrial reactions and industrially important chemicals. Introduction to catalysis.

CHEM— Instrumental Analysis 5 hrs
751
An examination of the use of instruments such as pH meters, spectronic 20, infrared, atomic absorption to teaching chemical concepts. Four hours lecture and one laboratory period per week.

CHEM— Independent Study 1-5 hrs
780
EDUC—Special Problems in Education 5-10 hrs

EDUC—Child Development 5 hrs
A study of the roles played by maturation and experience in the social, emotional, moral, cognitive, and physical development of children from the prenatal period to adolescence. Observation of children in public school required for two hours weekly.

EDUC—Human Growth and Development 5 hrs
A study of the development of the human from the prenatal period through adolescence. Focuses on the role played by maturation and experience in the social, emotional, intellectual, moral, and physical development of the individual. Includes genetic and environmental influences on the development of the person. Educational practices considered in relation to their effect on the development of children. Treats the relationship of learning and learning theory on classroom teaching and planning. Observation and study of children in public school required two hours weekly.

EDUC—The Nature and Development of the Middle Grades Learner 5 hrs
This course focuses on the nature and diversity of the middle grade learner. Emphasis is placed on the physical, emotional, social, and intellectual development of children from the end of early elementary into the early high school years.

EDUC—Problems in Educational Psychology 2 hrs

EDUC—Introduction to Word Processing for Teachers 3 hrs
This course is designed to enable teacher education majors at all levels to become proficient in the use of word processing as a tool for professional work and classroom applications. Emphasis will be placed on writing activities for students in public school classrooms. Emphasis will also be placed on software evaluation by teachers.

EDUC—the Young Child in the Home and Community 5 hrs
A study of the role of the home, community, and state in the education of young children in order to get maximum home reinforcement of the knowledge and skills taught by schools.

EDUC—Communication Arts in Early Childhood 5 hrs
This course will examine the nature of language development, foundations for language growth, children’s literature; as well as methods and materials in the skill areas of listening, speaking, writing, and reading.

EDUC—Mental Hygiene 5 hrs
An advanced course dealing with mental hygiene problems, especially of children and adolescents; problems of different stages of maturation adjustments in the home, school and play groups; and special needs in case of retardation and delinquency.

EDUC—Social Studies for Teachers 5 hrs
An integrated social studies course designed for teachers. Topics considered include responsibilities of family membership, occupations, labor unions, taxation, local government functions, ways of communications and world cultures other than that of the U.S.A.

EDUC—Classroom Management and Organization 5 hrs
This course is designed to provide classroom teachers with the knowledge and skills for managing the total instructional setting, including the individualization of instruction. Emphasis will be placed on grouping, teacher student relationships, establishing the classroom environment and coping with class conflict.

EDUC—Educational Media 5 hrs
The psychological principles underlying the use of audiovisual equipment and materials will be discussed. Extensive laboratory work will be included.
EDUC— Effective Teaching Strategies 5 hrs
A course designed to instruct students in methods of enhancing the public school curriculum. Students will study the forces at work in the community and learn how to use the community to benefit the school curriculum in such diverse areas as language arts, social studies, and the arts and sciences.

EDUC— Science for Elementary School Teachers 5 hrs
This course is for teachers of grades K-8. It deals with the everyday aspects of physics, chemistry, and astronomy as they might need to be explained by the elementary teacher. The work will include demonstrations and suitable experiments that can be performed with materials available in the average elementary and home situation.

EDUC— Teaching of Modern Science Curricula—(K-8) 5 hrs
Five hours of “hands on” class activity per week designed to familiarize the student with modern Elementary Science Programs and how to teach them.

EDUC— Teaching of Modern Science Curricula (7-12) 5 hrs
Five hours of “hands on” class activity per week designed to familiarize the student with modern Junior High and Secondary Science Programs and how to teach them.

EDUC— Career Education 5 hrs
This course provides the student with an orientation toward specialized skills and approaches in implementing world of work concepts through numerous classroom and field based activities. The student will examine existing materials for the purpose of adaptation to this classroom setting.

EDUC— Outdoor Education for Teachers 5 hrs
A course designed to enrich the school curriculum through experiences in the outdoors. Particular emphasis will be given to school camping and to the conservation of soil, water, forests and wildlife. The course requires extensive work in the field.

EDUC— Foundations of Education 5 hrs
The sociological, historical, and philosophical foundations for education in America.

GEOG— Concepts and Materials in Geography for Teachers 5 hrs
This course considers the evolution of the discipline, its current conceptional core, area “element-complexes,” systematic vs. regional analytical procedures. Considers standard bibliographic statistical and cartographic sources.

EDUC— Educational Research 5 hrs
Research procedures, experimental designs and the application of findings, and a research project conducted by the students.

EDUC— Psychology of Classroom Learning 5 hrs
Analytical study of learning activities in the classroom, with reference to the learning of school subjects. The focus is on the learning process. Theories and principles of learning are related to classroom situations.

EDUC— Statistics for Teachers 5 hrs
A basic introduction to probability and statistics for classroom teachers. Emphasis is placed on the normal distribution, sampling, and measures of central tendency.

EDUC— Fundamentals of Student Teaching Supervision 5 hrs
Prerequisites: Hold Professional Certificate. The first course of the two course sequence designed to provide teachers with an introduction to the theory, knowledge and practices utilized in effective supervision of student teaching and other field experiences. The course focuses upon specific supervising teacher competencies and the relationship of these competencies to effective supervision.

EDUC— Internship in Student Teaching Supervision 5 hrs
Prerequisites: EDUC 704 and serving as student teaching supervisor. Purpose of the internship is to assist in the development and utilization of the supervisor of a
student teacher. This field-oriented course is designed to meet specific individual needs of the supervisor. Direct assistance is provided through on site observations and feedback in addition to group seminars.

**EDUC—** Humanistic Psychology 5 hrs
707 Humanistic psychology includes the study of self-theory, being-psychoology, and wholistic approaches to human behavior.

**EDUC—** Interpersonal Relationships 5 hrs
708 A course intended to train teachers in basic, effective, teacher-student communication skills. Interpersonal skills are taught and demonstrated by the instructor. Students practice the skills in role playing situations. Skills included are: attending, responding, personalizing and initiating, problem solving, encouragement, and consequences.

**EDUC—** Research Problems—
709 Thesis 5-15 hrs

**EDUC—** Seminar in Early Childhood 5 hrs
710 Provides opportunities to analyze trends, issues, theories, and practices in early childhood education.

**EDUC—** Curriculum Planning 5 hrs
711 A study of curricula in the public school. Areas of concentrated study will be determined jointly by the school districts involved and the college.

**EDUC—** Language and the Young Child 5 hrs
712 Language and its acquisition; studied in relation to mental development and school achievement.

**EDUC—** Early Childhood Curriculum 5 hrs
713 Principles and practices for planning learning activities for preschool and primary grades. Directed observation in selected schools is required.

**EDUC—** Administration and Supervision of Early Childhood Programs 5 hrs
714 A study of administrative and supervisory procedures, organization, policies, standards, funding, staffing, housing, and educational program planning for various kinds of programs for young children. Parent involvement and education will be given special attention.

**EDUC—** Practical and Creative Activities for the Young Child 5 hrs
715 A course designed to give students experiences in selecting and presenting art activities, stories, finger plays, music, rhythms, woodwork, science and nature experiments.

**EDUC—** Educational Measurements and Evaluation 5 hrs
716 Theory of and practice in construction, administration, and interpretation of teacher-made and standardized tests. Introductory statistical concepts of measurement.

**EDUC—** Introduction to School Administration and Supervision 5 hrs
717 This course is an introduction to the study of school administration and supervision, and its contribution to the total school program. Emphasis will be placed on the underlying theories and significant studies which form the basis for the operation of today's schools. Students will study the various roles and responsibilities of the school leader, including personal management and staff development. In addition, students will be introduced to basic legal principles applicable to public education.

**EDUC—** Early Childhood Workshop 5 hrs
725 Developing teacher-made books, materials and equipment for educational use. Provides opportunities for study of philosophy or organization of open education.

**EDUC—** Trends in Early Childhood 5 hrs
727 An overview of the history of early childhood education. Current trends and issues with emphasis placed on various approaches to Early Childhood Education.
EDUC— Books and Materials for Young Children 5 hrs
Designed to familiarize students with appropriate books, materials, and equipment for program planning in day care centers, nursery schools, kindergartens, and primary schools. Language development will receive special emphasis.

EDUC— Practicum in the Middle Grades 5 hrs
Prerequisites: ED 604, ED 734. A supervised practicum for teachers working with 9-13 year olds.

EDUC— Practicum in Early Childhood 5 hrs
Field work based upon the background and individual needs of each student. Prerequisite: Permission of the instructor.

EDUC— Elementary School Curriculum 5 hrs
Deals with theories and philosophies of curriculum and the development of learning experiences. Students will analyze and evaluate current curriculum practices and trends.

EDUC— Middle School Curriculum 5 hrs
In this course students will analyze and evaluate current curriculum tends and practices. Theories and philosophies of curriculum for the middle grades learner will be used as the basis for analysis and evaluation. Development of appropriate learning experiences will provide practical application of the theories and philosophies of curriculum.

EDUC— Diagnostic Teaching 5 hrs
Deals with the learner’s needs. This course is designed to help the practitioner learn to diagnose learning problems and learning needs. Students will develop diagnostic models to be implemented in the classroom.

EDUC— Seminar in Elementary Education 5 hrs
This seminar is based on current trends in elementary education.

EDUC— Math for Teachers (K-8) 5 hrs

EDUC— Problems in School Organization and Curriculum 5 hrs

EDUC— Art for Teachers 5 hrs

EDUC— Music for Teachers 5 hrs
Advanced techniques and materials involved in the effective guidance of learners in kindergarten through high school are studied. Field experience and observation are required.

EDUC— Motivation and the Learning Environment 5 hrs
The purpose of this course is to train teachers in skills for motivating the learner. Topics included are: one to one and group communication skills, behavior modification, encouragement, consequences and problem solving. Understanding and application of skills will be stressed via feedback and discussion of demonstrations in class and on-the-job.

EDUC— Guidance in the Elementary School 5 hrs
Studies the nature and development of guidance services in the elementary school. Emphasis is given the particular characteristics of the elementary school as a unique climate for learning.

EDUC— School Law 5 hrs
This course is designed to acquaint the public school teacher with a practical, working knowledge of the principles of school law so as to enable them to recognize and solve the variety of legal problems they encounter during the school year. Topics such as contracts, tenure, non-renewal, liability, and teacher and student rights will be covered.

EDUC— Secondary School Curriculum 5 hrs
Deals with theories and philosophies of curriculum and the development of learning experiences in the secondary schools. Students will analyze and evaluate current curriculum practices.
EDUC— Problems in Teaching 5 hrs
779
This course can serve as an elective for graduate students in all majors. The content will vary according to the needs of students, availability of qualified personnel and the relevancy of the topic.

EDUC— Independent Study 5 hrs
780

EDUC— Internship in Supervision in Early Childhood Education 5 hrs
791
Field work under the supervision of an administrator or supervisor and the College staff.

LANGUAGE ARTS

LART— Children’s Literature 5 hrs
608
The reading and evaluation of books for children. Discussed in the course are sources of information about children’s books, children’s interests in reading, the work of important authors and illustrators, and problems in the guidance of reading.

LART— Language Arts for Elementary Grades 5 hrs
609
This course provides for individual diagnosis and correction of problems in the student’s handwriting, spelling, oral and written expression. Consideration is given to the study of appropriate techniques and materials of the teaching of reading, handwriting, spelling, and oral and written expression in the elementary school.

LART— The Teaching of Reading 5 hrs
620
An intensive study of reading skills. The role of readiness, vocabulary development, phonics, and word recognition as each is related to comprehension will be studied. Students will be required to participate in the teaching of reading in the public school.

LART— Teaching Reading in the Content Areas 5 hrs
630
Study of objectives and methods for teaching comprehension, vocabulary, study skills, and critical reading in the content areas. Attention to remedial and enrichment techniques for secondary students.

LART— Juvenile Literature 5 hrs
633
Reading and study of the various types of literature for young people, as well as a study of the appropriate reading programs for junior high school pupils, are included in this course.

LART— Methods in Teaching Composition 5 hrs
634
A study of the objectives and methods for teaching oral and written composition in grades K-8. Instructional methods as they relate to the processes of developing prewriting skills, utilizing varying modes of discourse, revising and editing compositions, and writing across the curriculum will be emphasized. This course also includes a microcomputer component in which the skills needed to integrate word processing within the composition curriculum will be taught.

LART— Trends and Practices in Reading Education 5 hrs
720
Survey and critical study of the recent research, changes, and innovative approaches in the field of reading. Current methods and practices in the teaching of reading will be examined, with emphasis on classroom organization or developmental reading.

LART— Diagnosis of Reading Disabilities 5 hrs
721
Prerequisites: LART 620. This is an advanced course dealing with the causes of reading disability and methods for diagnosis both in the classroom and in the special reading program. Emphasis will be placed on preparing the classroom teacher for a role of a “diagnostician” of students with reading disabilities.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>LART-722</td>
<td>Remediation of Reading Disabiliies</td>
<td>5 hrs</td>
<td>Prerequisites: LART 620, 621. This is an advanced course dealing with the correction and remediation of reading disabilities. Emphasis will be placed on the study of a variety of remedial strategies, materials needed for a program of remediation and management of the remedial program. Field experiences will be required.</td>
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<tr>
<td>LART-732</td>
<td>Practicum in Developmental and Remedial Reading</td>
<td>5 hrs</td>
<td>Supervised practice of diagnosis and remediation of disabled readers within public school setting. Regular classroom teaching of reading using a variety of approaches. Experience in working with a reading specialist under faculty supervision.</td>
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<tr>
<td>LART-736</td>
<td>Teaching Reading in Elementary and Middle Schools</td>
<td>5 hrs</td>
<td>In-depth analysis of current methods and practices in the teaching of reading. Examination and evaluation of various commercial materials will be studied as to effectiveness and adaptability. Laboratory time for teacher-made materials.</td>
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<td>LART-737</td>
<td>Organization and Supervision of the Reading Program</td>
<td>5 hrs</td>
<td>Study of methods of organizing the reading program as part of the total curriculum. Role and responsibilities of the reading specialist. Steps to follow in coordinating a school-wide reading program.</td>
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<tr>
<td>LART-738</td>
<td>Materials and Reading</td>
<td>5 hrs</td>
<td>Examination of leading basal readers with manuals and skill texts. Phonics materials, audio visuals, games, and various commercial materials will be studied as to effectiveness and adaptability. Laboratory time for teacher-made materials.</td>
</tr>
<tr>
<td>LART-739</td>
<td>Psychology of Reading</td>
<td>5 hrs</td>
<td>Study of neurological and psychomotor development, the processing of information, learning principles, motivation, the effects of culture and the use of operant conditioning as related to reading.</td>
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<tr>
<td>LART-742</td>
<td>The Teaching of Composition</td>
<td>5 hrs</td>
<td>A study of current approaches to the teaching of composition with the specific emphasis on sequential curriculum development K-12, motivational strategies, techniques of student evaluation, processes of revision, and program evaluation.</td>
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SPECIAL EDUCATION

Mental Retardation, Learning Disabilities, Behaviorally Disordered, (Programs for the endorsement in Interrelated and Gifted Education are also offered.)

SPED—Assessment of Exceptional Children 650  5 hrs
Prerequisites: SPED 660 and SPED 670 or 690. A course offering tests unique to assessing the developmental levels and potential achievement of exceptional children. Emphasis is on the use of the tests in planning and selecting curricular programs and activities.

SPED—Behavior Management 658  5 hrs
A course emphasizing clinical management of life events; permitting, tolerating, interfering, environmental manipulation, life-space interviewing. Focuses on classroom management.

SPED—Introduction to Exceptional Children 660  5 hrs
A study of physical, social, intellectual and emotional differences in children. The characteristics, both physical and behavioral, as well as methods of diagnosis and remediation for the academically talented, the mentally retarded, blind, partially sighted, deaf, hard of hearing, specific learning disabled, culturally disadvantaged and behaviorally disordered are reviewed.

SPED—Working with Parents of Exceptional Children 664  5 hrs
A course designed to teach the techniques which an educator uses in communicating with parents of exceptional children. The means of interpreting handicapping conditions and school programs to parents in order to get maximum home reinforcement of the attitudes, skills and knowledge taught in school are covered.

SPED—Educational and Medical Aspects of Crippling and Special Health Conditions 668  5 hrs
A study of physically disabling conditions which cause educational difficulties. Orthopedic conditions, progressive deterioration conditions, low vitality conditions, central nervous system injury and multiple handicaps are covered.

SPED—Introduction to Mental Retardation 670  5 hrs
A course designed to review the historical treatment, etiology and characteristics of the mentally retarded. Methods of diagnosing, placing and working with the retarded are covered.

SPED—Speech and Language Development of Exceptional Children 672  5 hrs
This course covers the current understandings of speech and language development of exceptional children, including non-English speaking and diverse cultural and racial groups.

SPED—Vocational Training and Career Education for the Exceptional Child 673  5 hrs
A course emphasizing the educator's role in career development and vocational experiences in the school and community. Job counseling, working with other disciples and agencies in the community, and supervision in job training situations are covered.

SPED—Methods and Materials for Teaching the Mentally Retarded 674  5 hrs
Prerequisites: SPED 650 and 670. Methods and materials as they relate to the development of desirable attitudes, abilities and skills of the mentally retarded.

SPED—Methods and Materials for Teaching Severely Mentally Retarded 675  5 hrs
Prerequisites: SPED 650 and 670. A course covering diagnostic criteria and the development of teaching materials and relationships with community organizations interested in developing schools or centers for mentally retarded.
SPED—680 Introduction to the Education of Children with Emotional Problems 5 hrs
A course designed to discuss behavioral characteristics of children with emotional and/or behavioral problems. Factors of etiology, identification and therapy are covered.

SPED—681 Characteristics of the Gifted 5 hrs
A course covering the identification and characteristics of gifted and talented students from pre-school through high school. Consideration is given to the exploration of alternatives for recognizing gifted and talented children who are culturally different and/or underachieving. Alternative services models and the major instruments used for identifying gifted and talented will be studied.

SPED—686 Program Development and Curriculum Planning for the Gifted 5 hrs
Prerequisites: SPED 681. Methods and materials as they relate to fostering creativity, developing interests, and channeling abilities of the gifted and talented students from pre-school through high school. The course will explore ways of organizing and promoting programs within the public school setting.

SPED—687 Practicum with the Gifted 5 hrs
Prerequisites: SPED 681 and SPED 686. Supervised practicum in programs for the gifted.

SPED—690 Introduction to Children with Learning Disabilities 5 hrs
A course giving an overview of the field of learning disabilities as concerned with etiology, referral, diagnosis, management and educational practices.

SPED—746A—Disabilities I & II 10 hrs
Prerequisites: SPED 690, 650, and 676. Supervised practicum in programs for children with learning disabilities.

SPED—746B—Interrelated Area I & II 10 hrs
Prerequisites: Approval of adviser. Supervised practicum in programs for children with learning and/or adjustment problems.

SPED—760 Administering and Supervising Public School and Special Educational Programs 5 hrs
The administrative practices and problems of organizations, staffing, curriculum development, and supervision of special education in schools. Consideration is given to self-contained and mainstreaming programs.

SPED—770 Advanced Theory in Curriculum Development and Methods for Teaching the Exceptional Child 5 hrs
Prerequisites: SPED 670 or 690, and 674 or 676, and 650. Advanced techniques in class organization, curriculum adjustment, and methods and techniques of teaching children with learning and/or behavior problems.

SPED—771-772-773 Practicum with the Mentally Retarded 15 hrs
Prerequisites: Permission of advisor. Supervised practicum in programs for the mentally retarded.

SPED—776 Methods and Materials For Teaching Children with Learning Disabilities 5 hrs
Prerequisites: SPED 690 and 650. A review of theory and research in identifying effective methods of prescriptive teaching and task analysis. Appropriate materials are identified for use in teaching children with specific learning disabilities.

SPED—777 Competencies in Diagnostic Prescriptive Teaching 5 hrs
Prerequisites: Two of the following: SPED 670, 680, 690. The major objective of this course is to offer the appropriate skills and techniques to enable teachers of children with school achievement and/or adjustment problems to more adequately ascertain areas of performance deficiencies of individual children and prescribe and administer corrective measures.
SPED— Methods and Materials for Teaching Children with Behavioral/Emotional Disorders 5 hrs
Prerequisites: SPED 650 and 680. A review of major approaches in the education of behavioral and emotionally disordered children. Understanding and planning adaptations in the educational programs for disturbed children. Appropriate plans and materials are identified for use with disordered children.

SPED— Practicum in Behaviorally Emotionally Disordered I 5 hrs

SPED— Practicum in Behaviorally Emotionally Disordered II 5 hrs

SPED— Practicum in Special Education 5 hrs

SPED— Problems of Teaching
Special Education 5 hrs
Prerequisite: Permission of instructor. A seminar providing the opportunity of examining problems and issues which teachers have in teaching handicapped and gifted children. The seminar is taught in relation to actual experiences of teachers.

SPED— Seminar in Special Education 5 hrs
Prerequisite: Permission of instructor. An advanced seminar designed to meet individual needs which teachers have in teaching handicapped and gifted children. The seminar focuses on current issues and trends in special education.

ENGL— History of English Language 5 hrs
A study of the background, origins, and development of the English language, with emphasis on phonological and morphological aspects.

ENGL— Southern Literature 5 hrs
The literature of the South, including a brief background study of the literary trends from the Civil War to the Southern Renaissance and concentrating on writers of the twentieth century.

ENGL— Shakespeare 5 hrs
A study of selected comedies, chronicles, and tragedies, with emphasis on the tragedies.

ENGL— Advanced English Grammar 5 hrs
A study of the structure of English with an introduction to the theories of traditional grammar, structural linguistics, and transformational-generative grammar.

ENGL— Selected Studies 5 hrs
Prerequisites: Permission of the Department. Reading, investigation, and writing, in the classroom or under informal direction of the faculty, on selected topics or areas not covered in other catalog listings. This course may be repeated for credit.

ENGL— Chaucer 5 hrs
Emphasis on the Canterbury Tales.

ENGL— English Renaissance 5 hrs
A survey of non-dramatic English literature from 1500 to the Restoration.

ENGL— English Literature of the Eighteenth Century 5 hrs
A Study of the major British writers of the neo-classical and pre-Romantic periods.

ENGL— English Literature of 19th Century Romanticism 5 hrs
A study of Romanticism with emphasis on the major poets.

ENGL— English Literature of the Victorian Era 5 hrs
A study of the major writers of the period in both prose and poetry with the background of social conditions in England from 1832 to 1900.

ENGL— Seminar in Nineteenth Century American Literature 5 hrs
Content will vary according to writers and movements studied.

ENGL— Seminar in Twentieth Century American Literature 5 hrs
Content will vary according to genres, authors, movements studied.
ENGL— Shakespeare’s Tragedies 5 hrs
740  An intensive study of Shakespeare’s major tragedies.

ENGL— Shakespeare’s Comedies 5 hrs
741  An intensive study of Shakespeare’s major comedies.

ENGL— Composition Studies for Teachers 5 hrs
750  Study and practice of composition theory and teaching techniques.

ENGL— Independent Study in English 1-5 hrs
780

ENGL— Studies in Nineteenth Century British Romanticism 5 hrs
790-791  An intensive study of Wordsworth-Coleridge or Byron-Shelley-Keats.

**FINE ARTS**

Candidates for the M.Ed. degree in Art Education should have an undergraduate major in Art Education or be qualified for an NT-4 Georgia teaching certificate in Art Education as well as meet the graduate admission requirements as outlined in this catalog.

Graduate studies courses require comparable undergraduate courses as prerequisites. Candidates must demonstrate art and design skills suitable to perform on a graduate level as determined by a graduate faculty review of the candidate’s portfolio.

**ART— Drawing**

610  A sequence of directed studies in drawing. 5 hrs
611  5 hrs
612  5 hrs
613  5 hrs
614  5 hrs

**ART— Painting**

615  A sequence of directed studies in painting. 5 hrs
616  5 hrs
617  5 hrs
618  5 hrs
619  5 hrs

**ART— Sculpture**

620  A sequence of directed studies in advanced techniques in sculpture in various media such as plaster, clay, metal, stone and fiber. 5 hrs

**ART— Elementary School Art**

631  Through lecture, slides, films, and filmstrips the developmental stages of Children’s Art, media and techniques appropriate for preschool and elementary grade levels, and planning for art lessons are introduced. Studio activities involve the student in experimentation with art materials, design concepts, and projects for art teaching at the elementary level. 5 hrs

**ART— Secondary School Art**

632  Art teaching concepts directed toward the adolescent and adult age levels. Studio activities will involve experimentation with art materials, teaching techniques, and art education philosophy that can be applied to secondary school and/or adult art program. 5 hrs

**ART— Teaching Crafts**

633  Experiences in a variety of craft activities to encourage design and cultural awareness. Skills of children at various levels will be considered as Craft Units are planned and adapted to classroom use. 5 hrs

**ART— Graphics**

640  A sequence of directed studies in printmaking. 5 hrs
641  5 hrs
642  5 hrs
643  5 hrs
644  5 hrs

**ART— Contemporary Art History**

650  Contemporary art and its development. 5 hrs

**ART— American Art History**

651  The development of painting, sculpture, architecture, and crafts in the United States. 5 hrs
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>ART 652</td>
<td>Renaissance Art History</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>An analysis of art monuments of the Renaissance.</td>
<td></td>
</tr>
<tr>
<td>ART 660</td>
<td>Textile Design</td>
<td>5</td>
</tr>
<tr>
<td>661</td>
<td>A series of directed studies in surface</td>
<td>5</td>
</tr>
<tr>
<td>662</td>
<td>design on fabrics.</td>
<td>5</td>
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<tr>
<td>663</td>
<td></td>
<td>5</td>
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<tr>
<td>664</td>
<td></td>
<td>5</td>
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<tr>
<td>ART 665</td>
<td>Weaving</td>
<td>5</td>
</tr>
<tr>
<td>666</td>
<td>A series of directed intermediate and advanced studies</td>
<td>5</td>
</tr>
<tr>
<td>667</td>
<td>in weaving, theory, spinning, and dyeing.</td>
<td>5</td>
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<tr>
<td>669</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>ART 670</td>
<td>Pottery</td>
<td>5</td>
</tr>
<tr>
<td>671</td>
<td>A sequence of directed studies of advanced</td>
<td>5</td>
</tr>
<tr>
<td>672</td>
<td>ceramic techniques will be studied which will include</td>
<td>5</td>
</tr>
<tr>
<td>674</td>
<td>the following; Production techniques as well as forms</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>of individual expression, clay and glaze formulating</td>
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</tr>
<tr>
<td></td>
<td>various methods of kiln firing and kiln construction.</td>
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<tr>
<td>ART 719</td>
<td>Thesis I and II</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Preparation and execution of an applied project in Art</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education.</td>
<td></td>
</tr>
<tr>
<td>ART 733</td>
<td>Classroom Art Curriculum</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>In-depth researching into problems of teaching art in</td>
<td></td>
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<td></td>
<td>the classroom. Curriculum planning and involvement in</td>
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<td></td>
<td>art materials and classroom teaching techniques will be</td>
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<tr>
<td></td>
<td>observed.</td>
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<tr>
<td>ART 734</td>
<td>Techniques of Teaching Art</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>In-depth techniques involved in effective methods of</td>
<td></td>
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<tr>
<td></td>
<td>guiding and supervision sequential art learning for</td>
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<tr>
<td></td>
<td>early childhood to adolescence.</td>
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<tr>
<td>ART 735</td>
<td>Analysis of Art for Teachers</td>
<td>5</td>
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<tr>
<td></td>
<td>A non-studio course designed to assist the teacher in</td>
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<tr>
<td></td>
<td>“art appreciation” activities. Historical and</td>
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<tr>
<td></td>
<td>contemporary art movements will be compared and</td>
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<td></td>
<td>analyzed.</td>
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<tr>
<td>ART 780</td>
<td>Independent Study in Art</td>
<td>1-5</td>
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</tbody>
</table>
MATHEMATICS

In addition to the basic requirements of North Georgia College for admission to the graduate program, a candidate in the area of Mathematics Education must exhibit training in Mathematics and Mathematics Education which qualifies the candidate for the T-4 teaching certification in Mathematics. Until such requirements are met as approved by the Director of Certification of the State Department of Education, the student will not be allowed to file a program of study toward the degree.

All study programs must include Mathematics 701 and/or Mathematics 702.

**MATH—Differential Equations 5 hrs**  
600  
Prerequisite: MATH 246. An introductory course in ordinary differential equations with emphasis upon linear differential equations of the first and second order.

**METR—Meteorology 5 hrs**  
601  
A basic course designed to acquaint the student with the fundamental concepts of meteorology and its relation to other fields of interest. Mathematics will be used when it seems essential to the complete understanding of a concept. Included are such topics as air masses and fronts, cloud classification, precipitation mechanisms, weather observations, fundamental forecasting theories, and interpretation of weather charts and diagrams.

**MATH—Introduction to Mathematics for Elementary and Junior High Teachers I 5 hrs**  
610  
This course promotes facilities with the concepts, structure, and style of mathematics studied and taught in the elementary school with emphasis on the arithmetic strands.

**MATH—Introduction to Mathematics for Elementary and Junior High Teachers II 5 hrs**  
611  
This course promotes facilities with the concepts, structure, and style of mathematics studied and taught in the elementary school with emphasis on the geometric strands.

**MATH—Geometry for Teachers 5 hrs**  
612  
Prerequisite: MATH 246 or permission of the Department Head. Designed to prepare the student to teach modern secondary school geometry. Euclidean and non-Euclidean geometries.

**MATH—Elementary Vector Analysis 5 hrs**  
615  
Prerequisites: MATH 247 or approval of the Department Head. The elements of vector algebra and vector calculus with some space generalizations.

**MATH—Orthogonal Functions and Boundary Value Problems 5 hrs**  
616  
Prerequisites: MATH 247 and MATH 300, or approval of Department Head. A study of Fourier series and integrals, Sturm-Liouville systems, applications to solution of partial differential equations with boundary conditions.

**MATH—Mathematical Analysis I 5 hrs**  
620  
Prerequisite: MATH 246 or consent of the Department Head. An introduction to the real number system, the basic notions of set theory, limit concepts and continuity, and the foundations of the differential and integral calculus of one variable.

**MATH—Theory of Numbers 5 hrs**  
631  
Prerequisite: MATH 246. A study of elementary problems in number theory with topics from divisibility congruences, residues, special functions, Diophantine equations, continued fractions.

**MATH—Probability and Statistics 5 hrs**  
639  
Prerequisite: MATH 246. A calculus based introduction to probability distributions and statistical inference. Topics will include probability distributions, expectation, hypothesis testing, and estimation procedures.
MATH—Introduction to Discrete Mathematics 5 hrs
Prerequisite: MATH 240 or MATH 340 or BADM 352 and programming ability in one high level language. A study of various research problem solving techniques. Topics will be selected from the following: Linear programming, Network Analysis Theory, queuing theory, inventory theory, and simulation. Students will use computer programs throughout the course to solve problems discussed in class.

MATH—Computer Application in Operations Research 5 hrs
Prerequisite: CPSC 235 or CPSC 251; 10 hrs. of college level math. The use of computers in linear programming, sensitivity analysis, transportation and assignment problems, game theory, queuing model simulation.

MATH—Numerical Analysis 5 hrs
Prerequisite: MATH 246. Numerical solutions to problems in mathematics; roots of non-linear equations, zeros of polynomials interpolation, systems of linear algebraic equations, quadrature ordinary differential equations methods on computer.

MATH—Mathematical Models 5 hrs
Prerequisites: MATH 240 or 340 plus MATH 246 or approval of Department Head. A study of various mathematical models, with emphasis on problems from the managerial, social, and biological sciences. Topics will be selected from the following: Graph Theory, Matrix Algebra, Probability, Combinatorial Theory, Mathematical Programming, Calculus-based Models.

MATH—Abstract Algebra 5 hrs
Prerequisite: MATH 246 or approval of Department Head. A formal introduction to the algebra of groups, rings, and fields.

MATH—An Introduction to Linear Algebra 5 hrs
Prerequisite: MATH 246 or consent of Department Head. An introduction to the basic concepts of linear algebra. Topics include finite-dimensional vector spaces, bases, linear transformations, and matrices.

MATH—History of Mathematics 5 hrs
Prerequisite: MATH 246 or approval of Department Head. A survey of the historical development of mathematics with emphasis on topics for secondary teachers.

MATH—Seminar in Applications of Mathematics 5 hrs
Topics will vary among social, business, and scientific applications of mathematics, statistics, operations research, and the computer.

MATH—Foundations of Geometry 5 hrs
A study of Euclidean and Non-Euclidean topics.

MATH—Topics in Modern Algebra for Teachers 1-5 hrs

MATH—Topics in Matrix Algebra for Teachers 1-5 hrs

MATH—Topics in Calculus for Teachers 1-5 hrs

MATH—Topics in Geometry for Teachers 1-5 hrs

MATH—Topics in Graph Theory for Teachers 1-5 hrs

MATH—Topics in Combinatorial Mathematics for Teachers 1-5 hrs

MATH—Topics in Computer Science for Teachers 1-5 hrs

MATH—Topics in Discrete Mathematics for Teachers 1-5 hrs

MATH—Computers in Mathematics Education 5 hrs
Description: A study of curriculum issues involving computers and mathematics, the use of the computer as a teaching aid, mathematical applications of BASIC and LOGO, and strategies of implementing and teaching a computer based curriculum.

MATH—Probability and Statistics 5 hrs
A study of various distributions and hypothesis testing.

MATH—Independent Study in Math 5 hrs
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MLAN-615</td>
<td>Advanced French Composition and Syntax</td>
<td>5 hrs</td>
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<tr>
<td>MLAN-617</td>
<td>French Literature of the Seventeenth Century</td>
<td>5 hrs</td>
</tr>
<tr>
<td>MLAN-618</td>
<td>French Literature of the Nineteenth Century</td>
<td>5 hrs</td>
</tr>
<tr>
<td>MLAN-619</td>
<td>Contemporary French Literature</td>
<td>5 hrs</td>
</tr>
<tr>
<td>MLAN-620</td>
<td>Guided Study in Foreign Languages</td>
<td>5 hrs</td>
</tr>
<tr>
<td>MLAN-650</td>
<td>French Phonetics</td>
<td>5 hrs</td>
</tr>
<tr>
<td>MLAN-695-696</td>
<td>“Study Abroad Program”</td>
<td>5 hrs/5 hrs</td>
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<tr>
<td>MLAN-701</td>
<td>Advanced French Grammar</td>
<td>5 hrs</td>
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<tr>
<td>MLAN-702</td>
<td>Advanced German Grammar</td>
<td>5 hrs</td>
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<tr>
<td>MLAN-703</td>
<td>Advanced Spanish Grammar</td>
<td>5 hrs</td>
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<tr>
<td>MLAN-706</td>
<td>Romance Philology for French and Spanish</td>
<td>5 hrs</td>
</tr>
<tr>
<td>MLAN-707</td>
<td>Old French</td>
<td>5 hrs</td>
</tr>
<tr>
<td>MLAN-721</td>
<td>French Literature of the Renaissance</td>
<td>5 hrs</td>
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<tr>
<td>MLAN-722</td>
<td>French Literature of the Eighteenth Century</td>
<td>5 hrs</td>
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<tr>
<td>MLAN-731</td>
<td>German Literature Since 1945</td>
<td>5 hrs</td>
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<tr>
<td>MLAN-780</td>
<td>Independent Study in Foreign Languages</td>
<td>5 hrs</td>
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<tr>
<td>MLAN-795-796-797</td>
<td>“Studies Abroad”</td>
<td>5, 5, 5 hrs</td>
</tr>
</tbody>
</table>
PHYSICAL EDUCATION

The Department of Physical Education encourages each student to select those courses which will complement an individual's specific background or objectives. A specific requirement is that 10 of the 25 to 30 hours in the core area of physical education be 700 level courses.

**PHED—** Sex Education 5 hrs
600 A study of the attitudes and standards of the physical, emotional and behavioral aspects of sex.

**PHED—** Materials and Methods in Physical Education 5 hrs
605 A study of the administrative processes and methodology needed to develop a thorough understanding of desirable standards and program implementation in physical education.

**PHED—** Elementary and Secondary School Physical Education 5 hrs
620 A study and practicum in the objectives, needs, methods, and materials of elementary and secondary school children involved in a modern day physical education program.

**PHED—** Exercise Physiology 5 hrs
650 A combined study of the structure and function of the human body. Lecture and laboratory experience includes the study of the minute and gross anatomical and physiological structures of man as it relates to man living in the physical world of muscular activity.

**PHED—** Kinesiology and Therapeutics 5 hrs
660 A study of the movements of the human body and their working relationship in normal and atypical individuals.

**PHED—** Health Education 5 hrs
690 A study of the physical and mental health problems of society as they relate to man and his confrontations with mental health, alcohol, disease, drugs, marriage, nutrition, physical fitness and sex.

**PHED—** Wellness 5 hrs
695 This is a lifestyle course covering the many facets of wellness and its relationship to improving both the quantity and quality of life. Topics include, but are not limited to self responsibility, nutritional awareness, environmental sensitivity, stress management, and personal fitness.

**PHED—** Curriculum Planning in Physical Education 5 hrs
700 Deals with the administration, planning, construction, and content of curriculum in modern day physical education programs.

**PHED—** Scientific Aspects of Exercise 5 hrs
704 A consideration of the effect of exercise on the functions of the organic systems of the body with particular emphasis on the physiological changes occurring during exercise.

**PHED—** Prevention and Treatment of Athletic Injuries 5 hrs
705 This course deals specifically with the immediate care and long term prevention, treatment and rehabilitation of injuries occurring from sports and physical activities.

**PHED—** Analysis of Motor Skills 5 hrs
706 Analysis of motor skills based on laws and principles of mechanics.

**PHED—** Administration of Physical Education in the School Program 5 hrs
713 Program planning; budgeting, selection, care and maintenance of equipment and facilities; personnel; and other administrative problems; evaluation of physical education in the school programs.
PHED— Current Problems in Health, Physical Education and Recreation 5 hrs
Problems met in a comprehensive program of health, physical education or in recreation in the school and community. Special emphasis given to problems in areas of students' interests.

PHED— History of Physical Education 5 hrs
Greek and Roman concepts of physical education, education and physical education in the Renaissance and Reformation, historic events, and principles of European and American physical education. Special reference given to the value of physical education in the current economic and social life of the nation.

PHED— Case Studies in Physical Education and Athletics 5 hrs
Problems dealing with the administration and teaching of physical education and athletics are studied by using the case study method.

PHED— Movement Education 5 hrs
Movement education, which emphasizes exploration and discovery of sound natural movement, will be studied to provide a basic understanding of the evolution, nature, purpose, methods, and various techniques used in this modern approach to physical education.

PHED— Aspects of Sports in American Culture 5 hrs
An analysis of the place of sport in American culture. A study of the historical influences of sport on economics, politics, nationalism, curriculum and methods of instruction, professional preparation, dance, leisure, and amateur and professional status.

PHED— Theories of Coaching 5 hrs
A focus on why athletics and spectators behave the way they do in various athletic and physical activity settings and how said scope encompasses the major psychological dimensions underlying such behavior.

PHED— Independent Study in Physical Education 5 hrs
The study of a topic or problems in Physical Education significantly related to the student's interest. (By approval of student's advisor.)

PHYS— Mechanics for Teachers 5 hrs
Four lectures and discussions and one two-hour laboratory period per week. Prerequisite: MATH 245. The course is designed to aid the elementary physics teacher in dealing with problems in mechanics which may arise in his teaching. The effective presentation of physics concepts in this area will be emphasized.

PHYS— Waves, Electricity, and Magnetism 5 hrs
Prerequisite: Physics 605. This course is designed to aid the elementary physics teacher in dealing with problems in waves, electricity, and magnetism which may arise in his teaching. The effective presentation of physical concepts in this area will be emphasized. Four lectures and discussions and one two-hour laboratory period per week.

PHYS— Modern Physics 5 hrs
Prerequisite: Physics 605. This course is designed to aid the elementary physics teacher in dealing with problems in modern physics which may arise in his teaching. The effective presentation of physical concepts in this area will be emphasized. Four lectures and discussions and one two-hour laboratory period per week.

PHYS— Mechanics—Analytical 3 hrs
Prerequisite: Physics 230/605. May be taken concurrently with MATH 300. Kinematics, using vector analysis, dynamics of particles, rotation and planetary motion, the linear harmonic oscillator, studies of energy, momentum and impact, introduction to the most general methods of solving dynamical problems.
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisites/Notes</th>
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</thead>
<tbody>
<tr>
<td>PHYS 636</td>
<td>Computer and Digital Design</td>
<td>3 hrs</td>
<td>An introduction to the fundamental concepts of digital systems, including digital computers. Emphasis is placed on the structure of digital systems and the basic organization of digital computers.</td>
</tr>
<tr>
<td>PHYS 650</td>
<td>Computer Interfacing</td>
<td>5 hrs</td>
<td>Prerequisite: PHYS 224, PHYS 376L. This course will demonstrate some of the possible applications of micro computing to scientific data acquisition, display and processing, in Basic or machine language or a hybrid combination of the two. The students will be provided with hands-on experience with the different types of hardware and interfaces usually found in microcomputer systems.</td>
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<tr>
<td>PHYS 660</td>
<td>Science for Elementary School Teachers</td>
<td>5 hrs</td>
<td>This course is for teachers of grades K-8. It deals with the everyday aspects of physics, chemistry, and astronomy as they might need to be explained by the elementary teacher. The work will include demonstrations and suitable experiments that can be performed with materials available in the average elementary and home situation.</td>
</tr>
<tr>
<td>PHYS 661</td>
<td>Teaching of Modern Science Curricula—(K-8)</td>
<td>5 hrs</td>
<td>Five hours of “hands-on” class activity per week designed to familiarize the student with modern Elementary Science Programs and how to teach them.</td>
</tr>
<tr>
<td>PHYS 662</td>
<td>Teaching of Modern Science Curricula—(7-12)</td>
<td>5 hrs</td>
<td>Five hours of “hands-on” class activity per week designed to familiarize the student with modern Junior High and Secondary Physical Science Programs and how to teach them.</td>
</tr>
<tr>
<td>PHYS 675A</td>
<td>Physics Laboratory I</td>
<td>1, 1, 1 hrs</td>
<td>Selected experiments from the various branches of physics, clarifying and expanding the work of the classroom, and evolving good laboratory techniques. The evaluation and the interpretation of experimental data.</td>
</tr>
<tr>
<td>PHYS 700</td>
<td>Thermodynamics</td>
<td>5 hrs</td>
<td>Prerequisites: Physics 225 and MATH 300. A study of the temperature and its measurement, calorimetry, and some topics from thermodynamics. Five lecture-reactions per week.</td>
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<tr>
<td>PHYS 701-702</td>
<td>Curriculum Study in Physics for Secondary Teachers</td>
<td>5, 5 hrs</td>
<td>These courses are designed to acquaint the student with some of the problems encountered in a high school physics presentation. A personalized system of instruction (self-paced-self-study) will be used to introduce the students to PSSC, Harvard Project, and ECCP curriculum projects. Both need not be taken to get credit.</td>
</tr>
<tr>
<td>PHYS 710</td>
<td>Electricity and Magnetism I</td>
<td>5 hrs</td>
<td>Prerequisite: Physics 240 or 610. With consent of instructor, may be taken concurrently with MATH 300. A course considering in somewhat more advanced manner the topics of electrostatics, magnetostatics, electrolysis, basic circuit theory, and related topics.</td>
</tr>
<tr>
<td>PHYS 720</td>
<td>Electricity and Magnetism II</td>
<td>5 hrs</td>
<td>Prerequisite: Physics 410 or 710. This course is a continuation of Physics 410 with emphasis on electrodynamics, alternating current theory, transmission lines, filters, electromagnetic wave theory and related topics.</td>
</tr>
<tr>
<td>PHYS 740</td>
<td>Nuclear Physics</td>
<td>5 hrs</td>
<td>Prerequisite: Physics 320 or 250. A study of natural radioactivity, interaction of radiation with matter, radiation measuring instruments and the detection of nuclear particles plus a survey of the current state of experimental and theoretical nuclear physics.</td>
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<tr>
<td>PHYS 750</td>
<td>Quantum Mechanics</td>
<td>5 hrs</td>
<td>Prerequisites: Physics 250 or 320, MATH 300. Introduction to the quantum mechanics of one-dimensional systems. An introduction to Schroedinger's equation with emphasis being placed on solutions for one-electron atoms.</td>
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</table>
PHYS—— Physics Laboratory II  
775, 776,  
777  
A continuation of Physics Laboratory I.  

PHYS——  
780  

PHYS——  
790A-E  
Introduction to Research  
Methods  
1-5 hrs  
This course consists of two or three lectures and demonstrations per week with laboratory work. The lectures will include the various research techniques, theory of errors, analysis of experimental data, use of library sources, and report writing. The student will be required to use library sources and to perform various experiments. The student will also be required to report his work by class talks and written reports.

PSYCHOLOGY

PSYH——  
601  
Child Development  
5 hrs  
A study of the roles played by maturation and experience in the social, emotional, moral, and physical development of children from the prenatal period to adolescence. Observation of children in public school required for two hours weekly.

PSYH——  
602  
Developmental Psychology  
5 hrs  
A study of the physical, social and cognitive aspects of human behavior from birth to death.

PSYH——  
605  
Educational Psychology  
5 hrs  
Emphasis on learning, its nature, motivation, retention, appraisal, transfer, and application. Adjustment of educational practices to individual differences in abilities and interests among pupils will be considered. Some observation in teaching-learning situations will be done.

PSYH——  
606  
Health Psychology  
5 hrs  
A survey of the role of psychological factors in the promotion and maintenance of health, in the prevention and treatment of illness and dysfunction, and in the operation of the health care system.

PSYH——  
607  
Statistics for the Behavioral  
Science  
5 hrs  
Prerequisites: Math 240. A survey of the statistics which are most frequently used in the behavioral sciences. Particular emphasis will be placed on analysis of variance techniques; some of the more useful nonparametric techniques will also be covered. Primary concern will be with computation and interpretation.

PSYH——  
608  
Experimental Psychology  
5 hrs  
Prerequisite: PSYH 300A and MATH 240. This course is designed to introduce students to experimental methods as applied to behavior. Some basic standard tools will be presented. Students will learn design of elementary experiments. Laboratory time will be spent implementing simple procedures.

PSYH——  
609  
History and Systems  
5 hrs  
An integrative course emphasizing the origins and background of the science of behavior. Important contributors and their schools of thought will be studied. Relating these schools of thought to present systematic developments in psychology will be emphasized.

PSYH——  
610  
Psychological Reading and Research  
2 hrs  
Prerequisite:

PSYH——  
611  
Permission of Instructor  

PSYH——  
612  
Permission of Instructor  

PSYH——  
615  
Social Psychology  
5 hrs  
A survey of the effects of the social environment on human behavior. Coverage includes: aggression, altruism, attitude change, audience effects, conformity, group dynamics, interpersonal attraction, leadership, sex roles and social perception.

PSYH——  
619  
Measurement of Individual  
Differences  
5 hrs  
An introduction to theories and practices of psychological measurement. The
characteristics and uses of specific maximum and minimum performance assessment devices will be included.

**PSYH— Psychology of Leadership 5 hrs**
620
Psychology 101 is recommended but not required as a prerequisite. The characteristics of an effective leader will be studied and analyzed employing both a theoretical and an applied approach.

**PSYH— Physiological Psychology 5 hrs**
623
Prerequisite: 10 hours Biology. Personality is viewed as the integration of the morphology, physiological and psychological aspects of the organism. The relationship between the internal environment and such behaviors as food intake control, mating behavior, neural action, emotion, etc., will be considered.

**PSYH— Sensation and Perception 5 hrs**
625
A study of sensory systems emphasizing behavioral significance of structure and physiology.

**PSYH— Comparative Behavior 5 hrs**
628
A treatment of evolutionary trends in behavior including neural and hormonal mechanisms, with emphasis on physiology and function.

**PSYH— Psychology of Learning and Cognition 5 hrs**
631
An empirical and theoretical study of classical, and operant conditioning, perception, attention, memory thinking and language.

**PSYH— Individual Intelligence Testing: Wechsler and Stanford-Binet Scales 5 hrs**
633
Prerequisite: Psychology 419. Training in the administration, scoring, and interpretation of the Wechsler and the Stanford-Binet Scales. A minimum competency in the use of these scales for both children and adults is required.

**PSYH— Behavior Modification 5 hrs**
635
Selected behavior modification techniques including experimental analysis, successive approximation and other operant techniques, counter-conditioning, reciprocal inhibition, and others as applied to learning problems, mild behavioral disturbances, mild cases of retardation, and stress related disorders.

**PSYH— Theories of Personality 5 hrs**
643
A critical evaluation of the major theories of personality and a survey of research on major personality variables comprise this course.

**PSYH— Applied Research Techniques 5 hrs**
644
A study of the research methodology for applied problems and for non-laboratory settings. Coverage includes consumer, field, marketing, policy-oriented, program evaluation and survey research techniques. Active student participation in applied research projects is emphasized.

**PSYH— Abnormal Psychology 5 hrs**
653
This course involves the study of the historical perspectives of abnormal behavior, the various psychosocial models used to understand behavior as well as the study of personality development and adjustment. The major emphasis of the course will be a thorough investigation— involving the causes, dynamics, and treatment—of the following forms of abnormal behavior: transient situational disorders, neuroses, schizophrenia and paranoia, major affective disorders and suicide, sociopathic disorders, delinquency and crime, alcoholism and drug dependence.

**PSYH— Introduction to Clinical Psychology 5 hrs**
654
This course emphasizes clinical assessment techniques, biological and psychological therapies, and contemporary issues in clinical psychology.

**PSYH— Industrial/Organizational Psychology 5 hrs**
662
The study of human problems in work settings, selection, placement, motivation and job satisfaction, leadership, performance assessment, organizational development.

**PSYH— Psychological Counseling and Psychotherapy 5 hrs**
663
Prerequisites: PSYH 453. A study of the various methods employed in counseling and psychotherapy. These methods will be interpreted as they are applied in the treatment of both the “disturbed” and the “normal” individual.
PSYH—Group Dynamics 5 hrs
665 The study of the psychology of small group behavior. Coverage includes situational, physical and personality factors as they relate to group formation, interaction, and performance.

PSYH—Advanced Educational Psychology 5 hrs
715 Prerequisite: PSYH 101, PSYH 305 and two senior division courses in psychology. Applications of the scientific findings of psychology to the more complex problems of the educative process.

PSYH—Applied Psychology 5 hrs
721 Application of the principles of psychology to social, business, industrial, governmental, educational, military and other professional fields.

PSYH—Independent Study in Psychology 5 hrs
780 Independent reading and research in the area of student's interest with consent of instructor.
SOCIAL SCIENCE

The Department of Social Sciences offers a thirty hour Multi-disciplinary program leading to a Masters of Education in Social Science. In addition to the Admission Requirements of the North Georgia College Graduate Program a candidate must have an undergraduate background in the Social Sciences.

All study programs in the Social Sciences must include courses with three different designators and must include Social Science 601 (Research Methods) and Social Science 602 (Statistics for the Social Sciences) and four other courses drawn from the courses listed below. At least two of these courses must be from the 700 level. Candidates must successfully complete a written and oral comprehensive examination.

**HISTORY**

Seminars and Colloquiums

600 level courses are formal lecture-discussion format. 700 level courses are seminar or colloquium format.

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<td>HIST-600</td>
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<td>Studies in Early Modern Europe</td>
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<td>Studies in Nineteenth &amp; Twentieth Century World</td>
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<td>HIST-640</td>
<td>Studies in Modern World Revolutions</td>
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<td>Studies in U.S. History</td>
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<td>HIST-655</td>
<td>Studies in Social &amp; Cultural History of U.S.</td>
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<td>Studies in Southern History</td>
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<td>HIST-671</td>
<td>Studies in World War I</td>
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<td>Studies in World War II</td>
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<td>HIST-675</td>
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<td>HIST-687</td>
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<td>HIST-690</td>
<td>Studies in Regional and Local History</td>
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<td>HIST-699</td>
<td>Studies in Third World History</td>
<td>5 hrs</td>
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<td>Readings and Research in American History</td>
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<td>Readings and Research in American Social and Cultural History</td>
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<td>Readings and Research in Third World History</td>
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<td>HIST-771</td>
<td>American History Seminar</td>
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<td>HIST-772</td>
<td>World Civilization Seminar</td>
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<td>HIST-780</td>
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<td>HIST-781</td>
<td>Economic History Seminar</td>
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### POLITICAL SCIENCE

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<td>PLSI-655</td>
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<td>PLSI-656</td>
<td>Studies in the American Political Institutions</td>
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<td>PLSI-657</td>
<td>Studies in American Political Thought</td>
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<tr>
<td>PLSI-660</td>
<td>Studies in International Relations</td>
<td>5 hrs</td>
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<tr>
<td>PLSI-661</td>
<td>Studies in Soviet and Eastern European Government</td>
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<td>PLSI-662</td>
<td>Studies in Soviet Foreign Policy</td>
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<td>PLSI-663</td>
<td>Studies in Comparative Government</td>
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<td>PLSI-700</td>
<td>Readings and Research in the American Political System</td>
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<td>PLSI-701</td>
<td>Readings and Research in State and Local Government</td>
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<td>PLSI-702</td>
<td>Readings and Research in American Political Thought</td>
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<td>PLSI-703</td>
<td>Readings and Research in Constitutional Studies</td>
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<td>PLSI-704</td>
<td>Readings and Research in Latin American Studies</td>
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<td>PLSI-708</td>
<td>Readings and Research in Soviet and Eastern European Studies</td>
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<td>PLSI-773</td>
<td>Political Science Seminar</td>
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<td>PLSI-780</td>
<td>Readings in Civil Liberties and Judicial Process</td>
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SOCIAL SCIENCE

SOSC— 601 Research Methods in the Social Sciences 5 hrs
A basic introduction into the area of research methods. The main areas of social research will be examined. Field Survey Evaluation, Experimentation and Content, Pragmatic and Theoretical considerations will also be examined. A research project will be required of all students.

SOSC— 620 Statistics for the Social Sciences 5 hrs
Prerequisite: MATH 240 and SOSC 601. A brief review of the basis for inferential and descriptive statistics; statistical inference and the assumption of causality through specific techniques and procedures including correlation, regression, etc. Emphasis will be placed on understanding the concepts behind the techniques as well as the mechanical skills involved. Calculators will be helpful for this course.

SOSC— 635 Family Violence 5 hrs
Interdisciplinary course which will deal with the main areas of family violence, wife beating, husband beating, child abuse, sibling violence and "granny-bashing." These areas will be explored concerning causation social and cultural context. Research in the area, responsibility and proposed means of prevention will also be dealt with.

SOSC— 650 Law and Society 5 hrs
A general overview of how laws can affect society and how people's attitudes can affect the law. It will deal with several landmark cases and laws including Brown vs. Board of Ed. (desegregation), Roe vs. Wade (abortion), prohibition laws, drug abuse laws, and laws against homosexuality. The course will be taught in a seminar format.

SOSC— 700 Contemporary World Social Awareness 1-5 hrs
Interdisciplinary readings and research course taught in a seminar format. This course will explain the historical, political, and social implications of issues in the contemporary world.

SOCIOLOGY

SOCI— 605 Race and Ethnicity 5 hrs
An examination of the development and persistence of racial and ethnic cleavages in societies, especially the U.S. Close attention will be given to the historical and economic functions of racism and discrimination, as well as their implications for a pluralistic society.

SOCI— 610 Sociological Theory 5 hrs
A survey of the major theoretical concepts of major writers in sociology from Comte to the present.

SOCI— 615 Social Stratification 5 hrs
Explores the economic, political and social basis of stratification and inequality in the U.S. today. Attention is given to the origins and nature of social classes, as well as other social divisions such as occupation, sex, race, ethnicity, wealth and power.

SOCI— 618 Social Movements and Collective Behavior 5 hrs
An analysis of mass movements and collective protest from a historical and behavioral perspective. Emphasis is on understanding social movements as both agents and products of social change and their relationship to various other forms of collective phenomena.

SOCI— 621 Juvenile Delinquency 5 hrs
This course emphasizes three areas of the problem of juvenile delinquency—Causation, Treatment, and Prevention.

SOCI— 623 Social Change 5 hrs
This course examines the theories, directions, mechanisms, patterns, spheres and impacts of change at various levels of social organization in society.
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<td>SOCI-630</td>
<td>The Feminist Movement</td>
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<td>A historical study of the Feminist Movement in</td>
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<td>the United States emphasizing its political,</td>
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<td>economic, and social impact.</td>
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<td>SOCI-635</td>
<td>Political Sociology</td>
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<td>A sociological analysis of political systems</td>
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<td>and power and their relationship to social and</td>
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<td>economic forces. Attention is given to</td>
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<td>exploring the question of “who rules America”</td>
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<td>and the processes involved in maintaining and</td>
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<td>SOCI-640</td>
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<td>SOCI-641</td>
<td>Environment Technology and Society</td>
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<td>SOCI-650</td>
<td>Occupations and Organizations</td>
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<td>An analysis of occupations, professions, and</td>
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<td>Attention is paid to such topics as occupatio-</td>
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<td>ethics, as well as the effect of technology on</td>
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<td>SOCI-660</td>
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<td>them on the part of American society.</td>
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<td>SOCI-700</td>
<td>Readings and Research in Social Problems</td>
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<td>SOCI-780</td>
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<td>(Permission of Instructor)</td>
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</table>
The following Economics courses offered by the Department of Business Administration will be acceptable toward the fulfillment of requirements for the M.Ed. degree in Social Science Education.

**BADM—**

**621**

**Macroeconomic Analysis** 5 hrs
Prerequisites: BADM 151 and 152. An intensive study of the measurement, analysis, and control of aggregate economic activity. The economic principles underlying national income, business cycles, and growth are examined; and particular attention is given to problems involved in formulating economic policies.

**BADM—**

**622**

**Intermediate Economic Analysis** 5 hrs
Prerequisites: BADM 151 and 152. An intensive study of price theory and its uses. Specific topics covered include: the theory of demand, the theory of the firm, pricing in competitive and monopolistic markets, and the pricing of economic resources.

**BADM—**

**625**

**Money and Banking** 5 hrs
Prerequisites: BADM 151 and 152. A study of the basic principles and concepts of money and credit and their importance in the present economy. The major topics emphasized are the key role of the commercial banking system in our economy, central banking as a means of expanding and stabilizing the supply of money and credit, monetary and fiscal policies, international banking and finance, and other banking credit institutions.

**BADM—**

**626**

**Labor Economics** 5 hrs
Prerequisites: BADM 151 and 152. A study of the origin of the labor movement; population and the labor force; organized labor; union organization and management; collective bargaining; and the problems of unemployment, full employment, wage theory and policies, and labor legislation.

**BADM—**

**646**

**Public Finance** 5 hrs
Prerequisites: BADM 151 and 152. A study of the principles and techniques of government debt; specific tax and non-tax revenues; and expenditures at the national, state and local levels.

**BADM—**

**720**

**Economics for High School Teachers** 5 hrs
Develops the content, teaching, and application of economics to citizen needs for teachers who desire an understanding of general economics in the public school curriculum.

**BADM—**

**721**

**Economics for Elementary and Middle School Teachers** 5 hrs
Develops the content, teaching, and application of economics for teachers who desire an understanding of general economics in the K-8 public school curriculum.

**BADM—**

**722**

**Consumer Economics** 5 hrs
This course is designed for teachers and those students who desire a detailed study of consumer problems. The more important elements of consumer education are reviewed, including consumer goods, consumers; services, buying problems, consumer organization, problems of personal finance, and well balanced spending programs.

**BADM—**

**700**

**Readings and Research in Geography for Teachers** 5 hrs
This course considers the evolution of the discipline, its current conceptual core; area "element-complexes," systematic vs. regional analytical procedures. Considers standard bibliographic sources. Procedures in adapting information from several sources to the classroom.

(OFFERED THROUGH THE DEPARTMENT OF EDUCATION)
Graduate Faculty
GRADUATE FACULTY

DELMAS J. ALLEN (1988) .......................... Professor of Biology
B.A., University of North Carolina; B.S., M.S., American University of Beirut; Ph.D., University of North Dakota.

LINDA B. AUGUST (1972) ...................... Associate Professor of Social Science
A.B., Wesleyan College; M.S.S.W., University of Tennessee.

GEORGE B. BELDEN (1971) ........................ Professor of Education
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BIRDIE E. BELL (1966) .......................... Assistant Professor of Physical Education
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WILLIAM D. BELLAMY (1964) ................... Professor of Business Administration
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SIDNEY E. BENTON (1975) ........................ Fieldale Professor of Education
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PHILLIP G. BUCKHIESTER (1976) ................ Professor of Mathematics
and Computer Science
B.S., Ph.D., Clemson University.

MAC A. CALLAHAM (1963) ........................ Professor of Biology
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V. KAY COLBERT (1972) .......................... Professor of Education
B.A., University of Arkansas; M.A. Ph.D., University of Alabama.

JIM G. COONE (1968) ............................ Professor of Psychology
A.B., Carson-Newman College; M.S., Ph.D., University of Georgia.

WINSLOW G. CRANNEIL (1971) ................... Professor of Fine Art
A.A., Manatee Junior College; B.A., M.F.A., Florida State University.

THOMAS C. DAVIS (1964) .......................... Professor of Chemistry
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H. LAWRENCE DENNIS (1968) Professor of Business Administration B.S., Newberry College; CPA, State of South Carolina; M.S., University of South Carolina; D.B.A., University of Kentucky.

PAUL G. DOBSON (1972) Professor of Social Science B.A., Brooklyn College; Ph.D., New York University.

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CLAUD F. ELLIOTT, JR. (1984) Associate Professor of Physics A.S., Gainesville Junior College; B.S., North Georgia College; Ph.D., Clemson University.

JAMES M. EWING, JR. (1971) Professor of English B.A., M.A., University of Mississippi; Ph.D., University of Southern Mississippi.

DAVID FORE (1978) Associate Professor of Education A.B., Davidson College; M.A., Boston University; Ed.D., University of Houston.

THOMAS H. FOX (1976) Professor of Biology B.A., Gettysburg College; Ph.D., University of North Carolina at Chapel Hill.

MARC J. GILBERT (1981) Associate Professor of History B.A., M.A., Ph.D., University of California.

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PERCY C. JONES (1980) Associate Professor of Physical Education B.S., M.S., University of Southern Mississippi; Ed.D., University of Georgia.

DONALD E. KINKAID (1965) Professor of Physics B.S., M.A., Ph.D.; Clemson University.

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PAUL E. McCLURE (1969) Associate Professor of English A.B., Berry College; M.Ed., Georgia Southern College; Ph.D., University of Georgia.
PETER J. Mc DONALD (1977) .................. Associate Professor of Psychology
B.A., Macalaster College; M.S., Ph.D., Tulane University.

TERRY M. McLEOD (1975) .................. Professor of Education

MARY RUTH MILLER (1976) .................. Professor of English
A.B., Florida State University; M.A., George Peabody College; Ph.D., Duke University.

BRIAN MURPHY (1981) .................. Associate Professor of Political Science
B.A., University of Dayton; M.A., Ph.D., Miami University.

CHARLES S. NOBLE (1971) .................. Professor of Psychology
B.A., Hanover College; M.S., Ph.D., University of Georgia.

W. GUY OLIVER (1964) .................. Professor of Modern Languages
B.S., B.D., University of Manchester; Ph.D., Hebrew Union College.

JANIE D. OSBORN (1975) .................. Professor of Education
B.S., M.S., Ed.D., University of Alabama.

JOHN H. OWEN (1970) .................. Professor of Biology
B.S.A., University of Florida; M.S., Ph.D., University of Wisconsin.

ROBERT L. OWENS (1965) .................. Professor of Art
B.F.A., M.F.A., University of Georgia.

DAVE PANDRES, JR. (1971) .................. Professor of Mathematics
B.S., M.A., Ph.D., University of Texas.

JAMES C. PARKER (1975) .................. Associate Professor of Biology
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JAMES C. PARKS (1980) .................. Professor of Psychology
B.S.Ed., Auburn University; M.Ed., Ph.D., University of Georgia.

PAUL R., PATTEN (1980) .................. Associate Professor of Mathematics and Computer Science
B.A., University of Oklahoma, M.A., University of Massachusetts; Ph.D., University of Oklahoma.

JOHN F. PEARCE (1970) .................. Fuller E. Callaway Professor of Economics
B.S., Furman University; M.A., University of Pennsylvania; Ph.D., University of Alabama; C.I.U., American College of Life Underwriters.

WINSTON K. PENDLETON, III (1988) .................. Professor of Physics
B.S.E., University of Michigan; M.S., Ph.D., Air Force Institute of Technology.

JOHN E. RABER (1971) .................. Professor of Physical Education
B.S., Lock Haven State College; M.S., Bucknell University; Ed.D., University of Georgia.
RAY C. RENSI (1966) .................................. Professor of History
A.B., Milligan College; M.A., East Tennessee State University; Ph.D., University
of Georgia.

ALICE H. REYNOLDS (1981) .............. Associate Professor of Modern Languages
B.A., Georgia College; M.A., Ph.D., University of Georgia.

THOMAS W. RICHARDSON (1971) ............. Professor of Chemistry
B.S., M.A., University of Texas at Austin; Ph.D., University of Florida.

WILLIAM P. ROBERTS (1949) ................. Professor of Social Science
A.B., Emory University; M.A., Ph.D., University of North Carolina.

ROBERT G. SABA (1972) ......................... Professor of Education
B.S., College of Santa Fe; M.Ed., Louisiana State University; Ph.D., University of
Southern Mississippi.

TOMMYE M. SCANLIN (1972) ................. Associate Professor of Fine Arts
B.S.Ed., M.E.Ed., University of Georgia; MFA., East Tennessee State University.

GREGORY L. SHEETS (1987) .................... Assistant Professor of Sociology
B.A., M.A., Arkansas State University; Ph.D., Oklahoma State University.

LAWRENCE J. SOROHAN (1972) ................. Professor of Education
B.S.Ed., University of Dayton; M.Ed., Ph.D., Ohio University.

JUDITH N. TRUE (1975) ......................... Professor of Education
B.A., Marshall University; B.S., M.S., Florida State University; Ph.D., Georgia
State University.

JEWEL M. WADE (1975) .......................... Professor of Education
A.B., Mercer University; M.Ed., Ed.D., University of Georgia.

JIMMY C. WOODS (1988) ...................... Instructor of Mathematics and
Computer Science
B.S., M.Ed., North Georgia College; Ed.D., University of Georgia.

JOHN B. WOOLFOLK (1970) ................. Assistant Professor of Chemistry
B.S., Auburn University; M.S. Auburn University.
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