GRADUATE CATALOG

CHRISTOPHER NEWPORT
cnu
UNIVERSITY

1995 - 1996

A PROFILE OF THE UNIVERSITY

Christopher Newport University is a comprehensive, coeducational, state-supported institution within Virginia's public university system. An academic community founded on the ideals of excellence, integrity, mutual respect, and service, the University is committed to the search for truth, and dedicated to the discovery, interpretation, dissemination, and application of knowledge.

LOCATION	Newport News, Virginia (Population: 165,000) Twenty-five miles from Williamsburg and 35 miles from Virginia Beach
SIZE	Approximately 5,000 students, 92 percent of whom are Virginia residents
COLLEGES	College of Arts and Humanities College of Business and Economics College of Science and Technology College of Social Science and Professional Studies
ACADEMIC CALENDAR	Two 15-week semesters and a summer session with four or five terms
LIBRARY HOLDINGS	More than 300,000 volumes
STUDENT-FACULTY RATIO	17.6 to one
STUDENT LIFE	More than 60 student organizations, including sororities and fraternities
ATHLETICS	Division III member of the National Collegiate Athletic Association (NCAA) and of the Dixie Intercollegiate Athletic Conference (DIAC)
CAMPUS	The 75 acre campus includes 10 buildings, a 432 bed residence hall, tennis courts, gymnasium, outdoor track, and soccer field. The University library offers full-time professional reference service in support of student needs; in addition it provides access to numerous automated information retrieval systems, inter-library loan services and complete audio visual capabilities. Modern, well-equipped science laboratories and research facilities are available for student and faculty use. Up to date computing facilities which include several specialized computer laboratories support the educational needs of the students, faculty research and the investigation of information technology in modern society. The campus also serves as the permanent home of The Japanese Tea House in Virginia, an exact reproduction of the Enan Tea House, a 17th century landmark in Kyoto, Japan. The tea house is an invaluable resource which provides insight into Japanese culture and traditions and is a valued part of the University's Japanese Studies Program.

Christopher Newport University is an affirmative action / equal opportunity institution.

Christopher Newport University

1995-1996 Graduate Catalog

Virginia's State University on the Peninsula

Office of Graduate Studies
Newport News, Virginia 23606-2998

VOICE (804) 594-7544
TDD (804) 594-7155
FAX (804) 594-7304

Christopher Newport University Graduate Catalog
Volume 5, Number 1, July 1995

Student Responsibility for Catalog Information

Graduate students are held individually responsible for the information contained in the Christopher Newport University Graduate Catalog. Failure to read and comply with University regulations will not exempt students from whatever penalties they may incur. Students beginning their programs of graduate study at Christopher Newport University should retain this Catalog as a reference.

University Catalog Information

Christopher Newport University reserves for itself and its departments the right to supplement, withdraw, or change any provision or provisions of this catalog without prior notification. Interpretations of matters in this catalog are the responsibility of the Provost or the appropriate Vice President. The President of Christopher Newport University has final authority in matters of such interpretation.

Notice to Persons with Disabilities

The Office of Career and Counseling Services assists students with disabilities by understanding the individual student's particular strengths and needs and by providing support to help the student achieve academic goals. The aim of Services for Students with Disabilities is to provide students with disabilities, through reasonable accommodation, equal access to the programs, opportunities and benefits of the University. Please refer to page eight of this catalog for more complete information.

University Affirmative Action / Equal Opportunity Policy

Christopher Newport University, as an affirmative action / equal opportunity institution, does not discriminate in admission, employment, or any other activity, on the basis of race, sex, color, age, religion, national origin, physical handicap, veteran status, or political affiliation.

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Summer 1995

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May 9/Tuesday
Registration and classes begin

May 10/Wednesday
Drop/add and late registration

May 26/Friday
Classes end and final examinations

Term 3

May 30/Tuesday
Registration

May 31/Wednesday
Classes begin

May 31-June 2/Wednesday-Friday
Drop/add and late registration

June 15/Thursday
Last day to withdraw without grade penalty

June 29/Thursday
Classes end

June 30/Friday
Final examinations

Term 4
May 30/Tuesday
Registration

May 31/Wednesday
Classes begin (Monday/Wednesday)

May 31-June 8/Wednesday-Thursday
Drop/add and late registration

June 1/Thursday
Classes begin (Tuesday/Thursday)

July 4 Tuesday
Holiday-No classes

Term 4 con't.

July 6/Thursday
Last day to withdraw without grade penalty

July 14/Friday
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July 31/Monday
Classes end (Monday/Wednesday)

August 2/Wednesday
Final examinations (Monday/Wednesday)

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Classes end (Tuesday/Thursday)

August 4/Friday
Final examinations (Tuesday/Thursday)

Term 5

July 5/Wednesday
Registration

July 6/Thursday
Classes begin

July 6-10/Thursday-Monday
Drop/add and late registration

July 14/Friday
Thesis deadline for August degree completion (submit to Office of Graduate Studies).

July 20/Thursday
Last day to withdraw without grade penalty

August 7/Monday
Classes end

August 8/Tuesday
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Fall 1995
August 1/Tuesday
Deadline to submit **Intent to Graduate** form for December, 1995, degree completion (submit to Office of Graduate Studies)

August 28/Monday
Classes begin

August 28-September 1/Monday-Friday
Drop/add and late registration

September 4/Monday
Labor Day-classes will meet

October 14/Saturday
Fall recess begins at 12:00 noon

October 19/Thursday
Fall recess ends at 8:00 a.m.

November 1/Wednesday
Last day to withdraw without grade penalty

November 13-16/Monday-Thursday
Early registration for spring semester 1996

November 22/Wednesday
Thanksgiving recess begins after last class

November 27/Monday
Thanksgiving recess ends at 8:00 a.m.

December 8/ Friday
Thesis deadline for December, 1995, degree completion (submit to Office of Graduate Studies).
Last date to file **Application for Candidacy** for May or August, 1996, degree completion (obtain signatures and submit to Office of Graduate Studies).

December 9/Saturday
Classes end

December 11-16/Monday-Saturday
Final examinations

December 18/Monday
Final grades due at 12:00 noon

Spring 1996
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Deadline to submit **Intent to Graduate** form for May or August, 1996, degree completion (submit to Office of Graduate Studies)

January 15/Monday
Classes begin

January 15-19/Monday-Friday
Drop/add and late registration

March 2/Saturday
Spring recess begins after last class

March 11/Monday
Spring recess ends at 8:00 a.m.

March 22/Friday
Last day to withdraw without grade penalty

April 8-11/Monday-Thursday
Early registration for fall semester 1996

April 26/Friday
Thesis deadline for May degree completion (submit to Office of Graduate Studies).
Last date to file **Application for Candidacy** for December, 1996, degree completion (obtain signatures and submit to Office of Graduate Studies).

April 27/Saturday
Classes end

April 29-May 4/Monday-Saturday
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May 6/Monday
Final grades due at 12:00 noon

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CALENDAR

Unofficial Academic Calendar for Summer 1996

Term 2

May 7/Tuesday
Registration and classes begin

May 24/Friday
Classes end and final examinations

Term 3

May 28/Tuesday
Registration

May 29/Wednesday
Classes begin

June 27/Thursday
Classes end

June 28/Friday
Final examinations

Term 4

May 28/Tuesday
Registration

May 29/Wednesday
Classes begin (Monday/Wednesday)

May 30/Thursday
Classes begin (Tuesday/Thursday)

July 4/Tuesday
Holiday-No classes

July 29/Monday
Classes end (Monday/Wednesday)

Term 4 con't.

July 31/Wednesday
Final examinations (Monday/Wednesday)

August 1/Thursday
Classes end (Tuesday/Thursday)

August 2/Friday
Final examinations (Tuesday/Thursday)

Term 5

July 1/Monday
Registration

July 2/Tuesday
Classes begin

August 1/Thursday
Classes end

August 2/Friday
Final examinations

Term 6

July 29/Monday
Registration

July 30/Tuesday
Classes begin

August 28/Wednesday
Classes end

August 29/Thursday
Final examinations

Mission

Christopher Newport University is a comprehensive, coeducational, state-supported institution within Virginia's public university system. An academic community founded on the ideals of excellence, integrity, mutual respect, and service, the University is committed to the search for truth, and dedicated to the discovery, interpretation, dissemination, and application of knowledge.

The University provides an education that develops the student's intellectual, ethical, spiritual, and physical attributes. It prepares its students to pursue lives with meaning and purpose and to become responsible and contributing members of society. As an American university with a global perspective, Christopher Newport University enhances students' awareness and appreciation of the diversity that enriches us while building a community which unites us. It embodies the noble American maxim *E Pluribus Unum*, that is "From Many, One."

The University focuses on excellence in teaching and scholarship. The liberal arts provide the foundation for quality undergraduate programs in the humanities, in the natural and social sciences, and in business and the professional disciplines. Graduate programs provide students and faculty opportunities for advanced scholarship and learning. Graduate and undergraduate research brings students and faculty together to increase knowledge. Teaching, research, and community service benefit the constituencies of the University, the Virginia Peninsula, the Commonwealth, the nation, and the world.

History of the University

Christopher Newport University is the youngest four-year university in the Commonwealth of Virginia. At the same time, it came into being as part of the oldest academic institution in the Commonwealth. For this reason, then, the University combines the best of both long heritage and the contemporary outlook. CNU was established and authorized by the Virginia General Assembly in its 1960 session as a two-year branch of The College of William and Mary.

The University derives its name from Captain Christopher Newport, the English mariner who was among the most important men connected with the permanent settling of Virginia. It was Captain Newport who was put "in sole charge and command" of the small squadron of three ships which made the historic voyage, culminating with the landing at Jamestown in 1607.

Initially established as a two-year college called Christopher Newport College, it became a four-year, baccalaureate institution in 1971 and, in July of 1977, became totally independent of The College of William and Mary. The College began offering graduate programs in July of 1991 and in July 1992 was renamed Christopher Newport University.

The University first enrolled 171 students in September, 1961, at its initial home, a former public school building in downtown Newport News that was provided through the generosity of the City of Newport News and its School Board. The City of Newport News then purchased the site of the present campus, a 75-acre tract deeded to the Commonwealth of Virginia in 1963.

History of the CNU Graduate Program

In its 1990 session, the General Assembly of the Commonwealth of Virginia authorized Christopher Newport University to initiate its first program of graduate study, the Master of Arts in Teaching (M.A.T.) degree in mathematics and science, in the summer session, 1991. The initial concentration was at the middle school level. The second graduate program, a Master of Science in Applied Physics, was begun in the fall semester of 1992. The M.A.T. mathematics concentration expanded to the secondary level by the fall of 1993, and in the summer of 1994 Language Arts was added as another concentration to the M.A.T. degree. The Master of Science in Applied Psychology with an Industrial/Organization concentration began in the fall of 1994. This academic year begins the initiation of two Master of Science degree programs in Environmental Science and Nursing, plus the expansion of the M.A.T. Language Arts concentration to the elementary and secondary levels, and mathematics to the elementary level. Other degree programs at the master's level will be added as the needs of the service area of the University require and as they are approved by the State Council of Higher Education for Virginia (SCHEV).

Organization

The University is organized and instruction is provided to take into consideration the lifelong learning interests and needs of a mobile student body that includes many part-time students. The University cooperates with other colleges and local agencies with diverse missions. In these ways the University expands its learning resources and offers programs to meet the needs of its students.

The University derives its financial support from the Virginia General Assembly and from the tuition and fees paid by its students. The affairs of the University are directed by the Board of Visitors of Christopher Newport University, members of which are appointed by the Governor of Virginia. The President of the University, appointed by the Board of Visitors, has delegated authority over the administration and the courses of instruction of the University.

The University is divided into four Colleges: the College of Arts and Humanities, the College of Business and Economics, the College of Science and Technology, and the College of Social Science and Professional Studies, each administered by a college dean. Individual faculty members are responsible to the college deans and to the Provost in all matters pertaining to instruction. The Graduate Program is administered by the Director of Graduate Studies, with teaching and research carried out by the graduate faculty.

Organization of the Academic Year

The University year is divided into two semesters, August to December (Fall Semester) and January to May (Spring Semester); a mini session beginning in mid-May and ending in late May; and three or four summer sessions. Graduate students may apply for admission to the University at the opening of either semester or of any summer session.

Accreditation

Christopher Newport University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award degrees at the bachelor's and the master's level.

Student Services

The University's student development services and facilities are available to all students, including graduate students. These services and facilities are described fully in the *1995-1996 Christopher Newport University Catalog*.

Services for Students with Disabilities

The Office of Career and Counseling Services assists students with disabilities by understanding the individual student's particular strengths and needs and by providing support to help the student achieve academic goals. The aim of Services for Students with Disabilities is to provide students with disabilities, through reasonable accommodation, equal access to the programs, opportunities and benefits of the University.

Students will want to contact the Counselor, Services for Students with Disabilities, **well before** beginning their first semester if special services will be required. While consultation with the Counselor is always available, students who request accommodation by the University, must formally declare their disability by completing a form obtained from the Office of Career and Counseling Services.

In order to determine needs and provide the best services possible students may be asked to provide recent documentation concerning their disability. Such documentation would include the disability and suggestions for possible accommodation to enhance student access and/or success in the programs and activities of the University.

Questions concerning accommodation of a student's disability or handicap should be directed to the Counselor by mail or by calling (804) 594-7047, TDD (804) 594-7155 or TDD (800) 828-1120 (the Virginia Relay Center). The office is open weekdays from 8:00 a.m. until 5:00 p.m.

Location

The University is located in suburban Newport News, midway between Williamsburg and Norfolk. The campus is readily accessible to residents of the cities of Newport News, Hampton, Williamsburg, Virginia Beach, Chesapeake, Portsmouth, Smithfield, Gloucester, Poquoson, and the many surrounding counties. Air service is available at the nearby Newport News/Williamsburg International Airport and at the Norfolk International Airport.

Office of Admissions
Administration Bldg. Room 112
(804) 594-7015 or 1-800-333-4268
FAX: (804) 594-7333
Acting Director: Robert J. LaVerriere

It is the policy of Christopher Newport University to admit graduate students whose ability and preparation indicate potential for success in the programs offered. Admission to graduate study is competitive and based upon a careful review of each applicant's academic and professional qualifications. Students may be admitted to the University beginning the fall or spring semesters or prior to any summer session. Applicants are encouraged to apply well in advance of the term in which they wish to attend. Because CNU is an equal opportunity, coeducational university, admission is not based upon race, sex, color, age, religion, national origin, physical handicap, veteran status, or political affiliation.

The decision to admit an applicant to graduate studies at Christopher Newport University is based upon the recommendation of graduate faculty members in the appropriate academic department or departments. The Office of Admissions collects and reviews application materials. It then passes this information to the departments for their evaluation and recommendation. A classified student will, upon acceptance, be assigned a graduate faculty advisor to assist the student with an initial schedule.

Classified Status

Applicants approved to participate in a graduate program leading to a master's degree will be admitted as classified students. Students planning to use financial aid must be admitted under this status.

Unclassified Status

Applicants approved to take graduate courses apart from any program leading to a graduate degree may be admitted as unclassified students. Such students earn academic credit in the same way as classified students. Unclassified students are not eligible for financial aid.

Changing Status From Unclassified to Classified

An unclassified student must apply to the Director of Graduate Studies in order to change to classified status. Credit received as an unclassified graduate student may then be applied to a graduate degree. The amount of credit received as an unclassified student which is applicable toward a graduate degree will be determined by the student's advisor and the Director of Graduate Studies at the time the student changes to classified status.

Provisional Admission

In exceptional cases, the appropriate academic department may grant provisional admission as a classified or an unclassified student to an applicant who does not have a complete application. Any deficiencies in the application, such as a lack of scores for the Graduate Record Examination (GRE), must be provided by the withdrawal without grade penalty date published in the Registration News of that semester or summer session in which the applicant is enrolled. Students who do not submit these materials by the deadline will be automatically withdrawn from the course(s) in which they are enrolled.

Probationary Admission

If an applicant fails to meet the minimum standards for admission, but is judged to have academic and professional potential, the appropriate department may grant probationary admission. A student admitted with probationary status must earn a minimum 3.00 grade point average on the first six hours of course work attempted to be eligible to continue in the graduate school.

Application Deadlines

The deadlines for applying as a classified student are August 1 and December 15 for the fall and spring semesters, respectively, and May 31 for the summer session. After these deadlines, applicants may be required to apply for unclassified status. Application deadlines for international students are July 1 for fall semester, November 15 for spring semester and May 1 for summer session.

Application Materials Deadline

Students seeking admission to graduate studies at Christopher Newport University for the first time must submit the complete set of admission materials by the withdrawal without grade penalty date published in the Registration News of that semester in which the applicant is enrolled. Students who do not submit these materials by the deadline will be automatically withdrawn from the course(s) in which they are enrolled.

CLASSIFIED ADMISSION

An applicant seeking classified status must present the following credentials:

a) A transcript indicating the successful completion of all requirements for a baccalaureate degree from a regionally accredited college or university and a minimum grade point average of 3.0 (on a 4.0 scale) in the applicant's major field of study and for the applicant's last 60 semester hours of all undergraduate work;

b) Transcripts for all graduate work taken at other institutions;

c) Three letters of recommendation from persons able to judge the applicant's potential to complete the graduate program successfully;

d) Scores from the General Test of the Graduate Record Examination (GRE) taken within five years prior to the date of admission. For those applicants holding a Master's Degree the GRE may be waived by permission of the Director of Graduate Studies. A letter requesting a waiver is required.

Any other material which the applicant thinks is relevant to the admission decision is welcome. Individual departments may impose additional requirements for admission.

Documentation Requirements

A student applying for admission as a classified graduate student must present:

1. **Completed application forms**. These include the Application for Admission to Graduate Study and, for Virginia residents, an Application for In-State Tuition Rates.

2. **Transcripts**. Official transcripts of academic work from the college or university which awarded the baccalaureate degree and transcripts for other graduate work should be sent to the Admissions Office. These transcripts must indicate the date of the applicant's graduation, the degree received and a complete list of courses taken and grades received. Prospective students may also wish to submit official transcripts of undergraduate work taken at other institutions.

3. **Graduate Record Examination (GRE)**. Admission to graduate studies as a classified student requires taking the General Test of the Graduate Record Examination (GRE) within five years prior to the date of admission. The general test is available in a computer-delivered version. Test dates, registration deadlines, and other information are published each year in the GRE Information Bulletin. Copies of the Information Bulletin may be obtained from Educational Testing Service, Graduate Record Examination, P.O. Box 6000, Princeton, NJ 08541-6000. General information about the GRE can be obtained by calling (609) 771-7670 or for hearing disabled callers (TDD): (609) 771-7150.

4. **Letters of Recommendation**. Forms for the letters of recommendation are available from the Office of Admissions.

Admission for International Students

Students from other countries with adequate preparation for graduate study are invited to apply for admission at Christopher Newport University. The University is authorized under federal law to enroll non-immigrant alien students. Deadlines for applications from international students are given in the section on Application Deadlines.

International applicants who are not U.S. citizens are required to:

1. Submit an application for admission under classified (degree-seeking) status.

2. Have official, translated academic transcripts from all colleges and universities currently attending or previously attended sent to the Office of Admissions.

3. Submit scores from the Test of English as a Foreign Language (TOEFL). Students whose native language is not English or students who have not received a degree from an institution in an English-speaking country must present a minimum score of 550 on the TOEFL.

4. Submit scores from the General Test of the Graduate Record Examination (GRE) taken within

five years prior to the date of admission.

5. Complete Financial Resources Statement and provide official bank affidavits guaranteeing that adequate funds are available for university study, prior to coming to the United States. Since the University is a state-supported institution, it cannot provide financial aid to international students.

Evaluation of International Credits

International students must seek the assistance of World Education Services (WES) to have their education credentials evaluated. WES will prepare an objective, analytical report that describes the credentials and interprets them in terms of their U.S. equivalents. Contact WES at P.O. Box 745, Old Chelsea Station, New York, NY 10113-0745 or call (212) 966-6311.

UNCLASSIFIED ADMISSION

The University recognizes its obligation to students whose interests may not necessarily be served through immediate participation in the University's graduate degree programs. To meet this need, the University permits such individuals to enroll under unclassified (non-degree-seeking) status. Unclassified students may be in several categories:

1. Students who, at the time they enroll, do not wish to pursue a degree program, e.g., certain teachers who are taking a course for recertification purposes.

2. Students whose prior academic records indicate that they would benefit by taking courses of their choosing before they commit themselves to a degree program.

3. Students who want to earn academic credit applicable to a degree from another college or university.

Unclassified students earn academic credit in the same manner as classified students, and they must meet prerequisites for individual courses unless excused by the Director of Graduate Studies.

Applicants seeking unclassified status must submit the following credentials:

a) An official transcript indicating the successful completion of all requirements for a baccalaureate degree from a regionally accredited college or university and a minimum grade point average of 2.5 (on a 4.0 scale) in the applicant's major field of study and for the applicant's last 60 semester hours of all undergraduate work;

b) Official transcripts for all graduate work taken at other institutions.

Applicants who do not meet the above criteria may be admitted in unclassified probationary status. An unclassified student may not enroll in more than 15 graduate credits in any one academic year.

Credit received as an unclassified graduate student may be applied to a graduate degree if and when the student becomes a classified graduate student. The amount of credit received by an unclassified student which is applicable toward a graduate degree will be determined by the student's advisor and the Director of Graduate Studies at the time the student transfers to classified status.

Documentation Requirements

A student applying for admission as an unclassified graduate student must present:

1. **Completed Application Forms**. These include the Application for Admission to Graduate Study and, for Virginia residents, an Application for In-State Tuition Rates.

2. **Transcripts**. Official transcripts of academic work from the college or university which awarded the baccalaureate degree and transcripts for other graduate work should be sent to the Admissions Office. These transcripts must indicate the date of the applicant's graduation, the degree received and a complete list of courses taken and grades received.

REGISTRATION

A student must be registered as a graduate student in order to receive graduate credit. Upon receipt of notification of acceptance in the graduate school, the student will proceed to the Registrar's Office where the registration process will be completed. The final step in this process is the payment of fees.

A classified graduate student will initiate subsequent registrations by submitting a course schedule approved by his or her advisor to the Office of the Registrar.

The academic policies stated hereafter apply to all students who register for graduate studies at Christopher Newport University.

Program Planning

Each classified graduate student must consult with his or her advisor to formulate a plan of study organizing the student's work toward a graduate degree. This plan of study should be completed prior to the completion of the first 15 hours of graduate study. Changes to this plan may be made only with the approval of the advisor.

Registration

The University has established a pre-registration procedure for students already attending the University. This procedure is published prior to each semester, in time for students to take advantage of this option. Students who pre-register for fall or spring classes must pay all tuition and fees or make other arrangements with the University Business Office by the deadline dates announced in the Registration News. Students are not considered to be officially registered until tuition and fee payment (or other arrangements) have been made with the Business Office. Upon payment of tuition and fees students need only to begin classes at the designated time.

When you register during one of the pre-registration periods you will receive a bill for your tuition and fees through the mail. You must pay this bill by the deadline established for that session. If you do not pay the bill or make other arrangements with the Business Office by the established deadline **you must contact the Business Office to avoid being removed from registered courses**. The University reserves the right to cancel your registration if your bill is not paid or other arrangements have not been made. If you have registered during a pre-registration period and have not paid your bill by the deadline, please do not attempt to re-register without contacting the Business Office to determine your status.

Tuition and Fees

Information concerning tuition and fees may be found in the "Tuition, Fees and Financial Information" section of this Catalog.

Changes in Registration (Add/Drop)

Any changes in schedule must be approved by the student's advisor. After registering for classes, students must make any approved changes to their class schedules at the Office of the Registrar on the Schedule Change Form. Unless course changes are made in this manner, they will not be recognized by the University.

Late registrations and schedule changes are normally processed in the Office of the Registrar during the first five days of each semester (the schedule change period). Courses may not be added after this period without the approval of the Director of Graduate Studies. Courses dropped during this period do not become part of the student's permanent academic record.

Withdrawal from a Course

If serious and unforeseen circumstances arise, a graduate student may petition the course instructor to withdraw from a course in progress. The course instructor will determine whether the request will be allowed. A student who withdraws from a course after receiving permission will receive the grade W. A student who withdraws from a course without receiving permission will receive an F grade.

Withdrawal from the University

Withdrawal from the University means that the student ceases to attend all classes and is not enrolled in the University. Students desiring to withdraw from the University should do so by written application to the Director of Graduate Studies. Unless withdrawals from the University are made in this manner they have no official standing and will not be recognized as valid by the University. Students may withdraw from the University prior to the final examination period.

Medical Withdrawal

Students who wish to withdraw from the University for medical reasons must have a letter sent to the Director of Graduate Studies by a physician certifying that the student is incapable of completing the term's academic work for medical reasons. Upon receipt of this letter all grades for the semester in question will be recorded as a W grade on the student's transcript.

Unofficial Withdrawal

Students who cease to attend classes and who do not complete a withdrawal form or notify the Registrar, will receive a grade of F in each course taken.

Auditing a Course

Students may audit a course, with approval of their academic advisor, if class size permits. See the "Tuition, Fees and Financial Information" section for details concerning audit charges. Students auditing courses are subject to attendance regulations specified by the instructor but are not required to take tests or final examinations in the audited courses. By permission of the instructor, students may complete any of the required assignments. Auditing students' academic records will indicate AU rather than a regular letter grade. Students may change from credit to audit status up to the last day of class, provided they are passing the course. Changes from audit to credit status may be made only during the schedule change period. Out-of-state students must make financial arrangements with the Business Office before such a change is effective. If a student registers as an auditor but fails to comply with the instructor's attendance regulations, the instructor may direct that the notation W be posted to their permanent academic record, rather than AU.

Examinations

The examinations given at the end of each semester take place at times announced on the examination schedule (in the Registration News). Students are required to take all announced final examinations at the times scheduled unless excused as noted below (see "Absence From Examinations"). The University does not authorize re-examination, nor will changes be permitted unless the student has examinations scheduled in four consecutive periods. If a student is forced by conflict to request a change, the request must be made to the Director of Graduate Studies through the department chairman or instructor.

Absence from Examinations

Students may request to be excused from taking an examination at the scheduled time by presenting an acceptable reason for the expected absence to the instructor before the examination. The instructor should be notified as soon as possible if illness or other emergency causes a student to be absent from an examination. If the instructor cannot be notified, the student must notify the Office of the Registrar as soon as possible.

Commencement Exercises

Commencement exercises (graduation ceremonies) are held once each year, in May, when degrees are conferred upon all graduates who have completed degree requirements in the preceding August, preceding December, or May. Students who complete degree requirements in August or December will have diplomas mailed to them. Those who complete degree requirements in May will receive diplomas at the May ceremonies. All prospective graduates will be contacted by the Office of the Registrar concerning attendance at the annual commencement exercises. Those planning to attend must notify the Office of the Registrar by the announced deadline so that academic caps, gowns, and hoods can be ordered for all who plan to participate. All prospective graduates must keep the Office of the Registrar informed of any address changes. If all requirements, including courses and credits, are not met by the end of the spring semester, students will not be permitted to participate in the May ceremonies.

Academic Standards

Course Numbering

Courses numbered 500 through 699 may be applied to a graduate degree. Courses numbered 400/500 may be taken at either an undergraduate or graduate level. Additional work and/or a higher standard is required for those taking a course at the 500 level. A student who has taken a course number 400/500 as a 400 level course may not retake it as a 500 level course.

Grading System

The following grades may be earned in graduate courses:

Letter Grade	Meaning	Numerical Value
A	Excellent	4.00
B	Good	3.00
C	Passing (Poor)	2.00
F	Failing	0.00
I	Incomplete	
W	Withdrew	
S	Satisfactory (for thesis courses)	
U	Unsatisfactory (for thesis courses)	
AU	Audit	

An overall graduate grade point average of at least 3.00 is required on all work credited toward a graduate degree. No more than six credits of C grades will be credited toward a graduate degree.

An **incomplete** or I grade is given when some of the work required for a given course has not been completed because of some serious circumstance such as the student's illness. The uncompleted work must be completed before the incomplete grade can be changed. If the incomplete grade has not been changed after the first seven weeks of the next regular semester or if an appropriate extension has not been approved by the Director of Graduate Studies, the I grade will revert to an F grade.

If serious and unforeseen circumstances arise, a graduate student may petition the Director of Graduate Studies to **withdraw** from a course in progress. See the paragraphs on withdrawal from a course or from the University on pages 12-13.

A grade of **satisfactory**, S, or **unsatisfactory** U, will be given for thesis courses until all the work on the thesis is completed. After the thesis has been written, defended, and accepted, the thesis director will replace the S and/or U designation with a grade of numerical value. Until that time, the S or U designation assigned for thesis work (in progress) will not affect the student's grade point average.

Undergraduate Students Taking Graduate Courses

Graduating senior students may, under certain conditions, take graduate courses. Credit for such courses may not be applied toward an undergraduate degree but, upon graduation, will be transferred to the student's graduate record at the University.

Written permission from the Director of Graduate Studies is required before an undergraduate student may register for a graduate course. Forms for this purpose are available in the Graduate Studies Office. Undergraduates seeking graduate credit must have a grade point average of at least 3.0, and they are limited to one graduate course (with any associated laboratory) per semester and to a total of two graduate courses (with any associated laboratory).

Taking a Course For Undergraduate Credit

A graduate student may enroll in a course that carries undergraduate credit if, in the advisor's opinion, the student should be familiar with the subject matter of that course. A student registered for a course for undergraduate credit must complete all the requirements of the course and receive a grade for it. The grade will be noted on the graduate record but will not count toward a graduate degree nor be computed in any graduate grade point average.

Overall Graduate Grade Point Average

A student's overall graduate grade point average (OGGPA) is computed by dividing the total number of grade points earned in graduate courses at Christopher Newport University by the total number of graduate credits attempted at the University.

Grade Reports

Grade reports are sent to students at the end of the fall and spring semesters and in August for students who attend summer sessions.

Probation and Academic Suspension

If a classified student is not making satisfactory progress toward a graduate degree, that student may be suspended from the graduate program, and thereby be denied permission to continue in it. The determination of unsatisfactory progress must be made by the student's advisor and approved by the Director of Graduate Studies.

A classified student who earns an F grade in any graduate course or who earns more than six semester hours of U or C grades in graduate courses will be suspended from the graduate program.

Any student whose overall graduate grade point average falls below 3.0 or who earns a grade of C will be given a probation warning.

Appeal Processes

A student wishing to appeal the grade given in a graduate course must follow the appeal process described in the University Handbook, with the additional stipulation that any faculty member participating in the process must be a member of the graduate faculty.

Reinstatement Policy

All academic suspensions at the graduate level are made for an indefinite period of time. A suspended student must initiate an appeal for reinstatement by submitting a letter to the Director of Graduate Studies. This letter must include evidence supporting the appeal and demonstrating that the student is able to complete successfully the planned graduate program.

Reinstatement of a student on academic suspension to the graduate school is a two step process.

First, upon receipt of the letter initiating an appeal for reinstatement, the Director of Graduate Studies selects a committee of not fewer than three members of the graduate faculty drawn from the student's area of study or related areas. This committee will review the student's record and the evidence contained in the appeal letter and recommend accepting or rejecting the appeal. A recommendation to reinstate the student must be based on evidence strongly supporting the likelihood of the student's success in graduate school. This evidence may include 1) statements from the student, 2) the student's credentials or, 3) an explanation of circumstances leading to the original suspension. This committee may also impose requirements that must be completed prior to reinstatement. These requirements may include a fixed period of suspension (not to exceed one year following the semester during which the academic suspension being appealed occurred) or the taking of specific undergraduate courses designed to strengthen the student's deficiencies. The undergraduate courses must be completed with the grade of A or B. A student on academic suspension may not take graduate courses.

The Director of Graduate Studies will render a final decision on the appeal based upon this committee's recommendation. A student whose appeal is rejected must wait at least one year to appeal again. A student whose appeal is accepted moves on to the second step in the reinstatement process.

The second step in the reinstatement process consists of meeting all of the requirements imposed by the select committee. This same committee will review the student's progress and verify that the imposed requirements have been met completely. When they have been met, the Director of Graduate Studies will be notified and the reinstatement will be complete.

Upon reinstatement the student will be on probationary status. From this point on, all of the grades on the student's graduate record earned prior to suspension which are C, F or U will not be counted toward a master's degree. If a student who has been reinstated receives a grade of C, F or U in any graduate course, that student will be suspended.

Degree Requirements

Departmental Requirements

The following represent the minimum University requirements for the master's degree. Individual departments offering the degree may impose additional requirements.

Credits

A minimum of 30 semester hour credits is required for a master's degree. At least 24 of these credits must be taken at Christopher Newport University. As many as 6 semester hours of graduate credit may be transferred from another college and/or be taken elsewhere by a classified student as described below. Credit transferred from another institution will be counted toward the total number of credits required for the graduate degree but it will not be computed in the student's overall graduate grade point average.

Transfer of Credit

As many as 6 semester hours of graduate credit from another regionally accredited institution may be included in a classified student's graduate record if the following conditions are met: a grade of A or B must have been earned; courses taken with pass/fail or satisfactory/unsatisfactory grades are not acceptable for transfer credit. Courses submitted for transfer credit must have been applicable toward a similar degree at the institution awarding them. An official transcript showing the credits submitted for transfer and evidence of their applicability toward a graduate degree must be forwarded to the Admissions Office. The transfer of credit must be approved by the student's advisor and the Director of Graduate Studies. The request for transfer credit must be made during the student's first semester as a classified student. No transfer credit will be allowed for courses that have already been used to fulfill the requirements of another earned degree.

Transfer Credit Earned While Classified

A classified graduate student may take a graduate course at another regionally accredited institution and apply the credit toward a degree at Christopher Newport University, provided that the intended transfer of credit meets all of the requirements for transfer credit described above. Approval for such credit must be obtained from the student's advisor and from the Director of Graduate Studies before registering at the other institution. Generally, permission to take a course elsewhere will not be given during the student's last semester at Christopher Newport University.

Time Limit

Graduate students must complete all of their work toward a master's degree within a period of six calendar years. This period begins with the student's initial registration as a graduate student. Academic work, including transfer credit, taken more than six years prior to the award of the master's degree cannot be credited toward that degree. In extenuating circumstances a student may petition for a waiver of this limit. A request for a waiver of this time limit must be approved by the student's advisor and the Director of Graduate Studies. Additional conditions, imposed to verify the currency of knowledge involved in the courses for which the six year limit might be waived, may be imposed.

Course of Study

A plan of study showing a reasonable concentration of interrelated subjects must be developed by each student in consultation with his or her advisor. This plan must be formulated and approved by the student's advisor, and filed with the Director of Graduate Studies before the student has completed 15 hours of graduate study. Any change in the student's plan of study must be approved by the student's advisor and filed in the Graduate Studies Office. In case of changes in program requirements subsequent to the year the student became degree-seeking, changes to the standard degree program must be approved by the degree's Program Coordinator and the Director of Graduate Studies.

Academic Load

A student taking nine or more graduate credits during a regular term or six or more graduate credits during a summer session will be considered a full time student. Students need approval of the

Director of Graduate Studies in order to take more than nine credits in a regular term or more than six credits in a summer. No student may enroll for more than 12 graduate credits in a regular term or more than nine graduate credits in a summer under any circumstance.

Candidacy for the Master's Degree

A student must request candidacy for the master's degree prior to the semester in which he or she desires to receive the degree. To be eligible to petition for candidacy, students must 1) have achieved classified status; 2) have completed 21 semester hours of graduate course work; and 3) have a graduate grade point average of at least 3.00.

Comprehensive Examination

A comprehensive examination aimed at evaluating the student's proficiency in his or her field is required of all candidates for a master's degree. This comprehensive examination may be written and/or oral. The nature of the comprehensive examination is determined by the department(s) involved in administering the degree.

A student failing the comprehensive examination may request a re-examination within six months of the failure. Only one additional examination is permitted.

Thesis

Research resulting in the presentation of a thesis may be required by the department or departments involved in the degree program. In this case, the defense of the thesis may be considered as part of the comprehensive examination. Theses may be placed in the CNU library as research sources available to the academic community.

If no thesis is required as a part of the degree requirements, a minimum of 36 graduate credits will be required for the degree.

Summary of Minimum Requirements for a Master's Degree

a) Successful completion of minimum hours of the master's degree program course work;

b) An overall graduate grade point average of 3.00 in all CNU courses submitted for graduate credit (no more than two grades of C);

c) Registration and timely petition for candidacy prior to the final semester;

d) Successful completion of the comprehensive examination;

e) Successful defense of a thesis and presentation of five approved copies of the thesis to the Graduate Studies Office (if thesis is required).

Office of Student Accounts
Administration, Room 210

Comptroller: Maribeth Trun
(804) 594-7195

Students Accounts and Cashier's Office Hours:

Monday:	8:30 a.m. - 3:30 p.m.
Tuesday:	8:30 a.m. - 3:30 p.m.
Wednesday:	8:30 a.m. - 3:30 p.m.
Thursday:	10:30 a.m. - 5:00 p.m.
Friday:	8:30 a.m. - 3:30 p.m.

Tuition and Mandatory Fees

Tuition and comprehensive fees for graduate students during the academic year 1995-1996 were established by the Board of Visitors of Christopher Newport University at its meeting in April, 1995.

$140 per credit hour for in-state students
$331 per credit hour for out-of-state students

In addition, the following non-refundable general fees are applicable to graduate students at Christopher Newport University in the 1995-1996 academic year:

General Fees

Application Fee	$15.00
Classified Status Fee	$25.00
Registration Fee	$20.00
Late Registration Fee (additional)	$25.00
Academic Transcripts	No Charge
Returned Check Fee (per return)	$20.00
Late Penalty and Administration Fee (per payment)	$50.00
Reinstatement Fee (second week of classes)	$100.00
Reinstatement Fee (third week of classes)	$200.00
Graduation Fee*	$25.00

The graduation fee (*) is exclusive of regalia, which must be purchased at the University Bookstore.

ROOM AND BOARD

$4,750 per year (Includes 19-meal-a-week plan)

Tuition

Your tuition payment will depend upon the number of courses you take and is based on a charge for each credit hour of instruction. Please note that the tuition rate is established or reviewed each year by the Rector and Board of Visitors of Christopher Newport University.

General Fees

You must pay a one-time application fee for your initial admission to graduate studies at the University. The application fee is not refundable, may not be applied to other fees, and will not have to be paid more than once, as long as you register for one or more credit-instruction courses during each academic year beginning in the academic year following your payment of the fee. The fee is normally paid to the University's Office of Admissions and should be paid by check or money order if you apply through the mail. The fee must accompany your application for admission.

If you wish to be admitted to classified (degree-seeking) candidacy, you must also pay a **classified status fee**. This fee is not refundable, may not be applied to other fees, and will not have to be paid more than once. If you pay this fee with your initial application for admission but do not enroll in the term for which you originally applied, it may be carried forward only to the next term. You do not have to pay this fee unless you wish to be admitted to classified status.

A **registration fee of $20 per term** is charged for fall and spring terms. A **registration fee of $10 per term** is charged for each summer term. The registration fee is not refundable.

If you register during late registration you will be required to pay a **late registration fee of $25**. The late registration fee is in addition to the normal registration fee. You must pay this fee if you do not complete your registration during announced pre-registration or continuous registration periods.

The University charges a **$50 late payment fee** on all amounts owed to the University which are not paid by the payment due date.

Questions concerning payments and fees should be directed to the Office of Student Accounts, Room 210, Administration Building, (804) 594-7195.

Schedule Changes (Adds and Drops)

Any schedule change that results in additional funds due to the University is due and payable on the date the course is added. If the additional amount due is not paid on this date a $50 late payment fee applies.

During the week of add/drop the University is in the 75% refund period. If a student adds or drops courses, for equal credit hours, ON THE SAME DAY, there will be no financial penalty. However, if a student drops a course on one day and adds a course on another day, the student will be liable for 25% of the cost of the course dropped and will be charged full tuition and fees for the course added.

Any schedule change that results in a refund to the student, in accordance with the University's Refund Policy, will automatically be processed based on the date the course is dropped.

Residence Hall Financial Information

Cost per academic year for room and board is $4,750. A monthly Academic Management Services (AMS) plan is available, for details contact AMS at their toll free number (1-800-635-0120).

To apply, submit the Housing and Food Services contract with a $200 deposit to the Cashier, Business Office, Christopher Newport University. The deposit is held until you vacate the dorm.

There is no deadline to submit the contract and deposit; however, occupancy is on a first come first serve basis.

Cancellation of Housing and Food Services contract prior to check-in by the student:

1. Students who notify the Housing Office in writing on or before **June 1 (November 1 for Spring Term contracts)** of their intention to cancel this contract will receive 100 percent refund of the $200 deposit.
2. Students who notify the Housing Office in writing on or **before July 1 (December 1 for Spring Term contracts)** of their intention to cancel this contract will receive a 50 percent refund of the $200 deposit.
3. Students who cancel their contract after **July 1 (December 1 for Spring Term contracts) will forfeit the $200 deposit.**

4. Students who are denied admission to the University will receive a refund of the $200 deposit.

Cancellation of Housing and Food Services contract after check-in by the student:

1. Students who cancel their contract after occupancy, but who remain enrolled at the University will remain liable for the entire room and board fees for the term.
2. Students who are required to leave the residence hall for disciplinary reasons will remain liable for the entire room and board fees for the term.
3. Students who fail to meet to meet obligations under the terms of the contract may qualify for a refund for weeks not in residence, if applicable under University Policy, and will be assessed a $200 cancellation fee.

Billing for Fall Term 1995

If you register prior to July 1, 1995, your tuition bill will be mailed to you by July 14, 1995. Bills are mailed to the address you have provided to the Office of the Registrar. If you do not receive a bill by July 20, 1995, it is the student's responsibility to contact the Office of Student Accounts to obtain a copy of the bill. Failure to receive a bill does not waive the student's responsibility to pay the bill by the payment due date.

After July 14, 1995, students must pick up their bills immediately after registering at the Office of Student Accounts. For all registrations taking place after August 11, 1995, your tuition and fees are due on the day you register or a $50.00 late payment fee will be assessed.

Questions concerning payments and fees due should be directed to the Office of Student Accounts, Room 210, Administration Building, (804) 594-7195.

Paying Your Bills Fall Term 1995

Tuition and fees are considered fully earned and are due at the time you register or no later than 4:00 p.m. on FRIDAY, AUGUST 11, 1995. Tuition payment may be mailed if RECEIVED IN THE UNIVERSITY BUSINESS OFFICE NO LATER THAN AUGUST 11, 1995, AT 4:00 p.m. Postmark date does not apply. AT 4:00 p.m. ON AUGUST 11, 1995, THE UNIVERSITY WILL CANCEL THE REGISTRATION FOR ALL STUDENTS WHO HAVE NOT MADE FINANCIAL ARRANGEMENTS. THESE STUDENTS MAY REGISTER AGAIN BEGINNING ON AUGUST 22, 1995. PAYMENT IS DUE AT THE TIME OF REGISTRATION.

Please note that the University charges a $25.00 late registration fee in addition to the regular registration fee of $20.00. The University does not guarantee that students will be able to obtain their original schedules. Classes are on a first come first serve basis. REINSTATEMENT DOES NOT APPLY IF YOUR REGISTRATION IS CANCELED PRIOR TO AUGUST 28, 1995.

Payment must be made at the Cashiers Office with cash, check payable to Christopher Newport University (CNU), money order, VISA or MASTERCARD. Payments by VISA or MASTERCARD may be made by mail or phone (594-7042). Students may also pay their tuition bills to the University through a deferred payment program offered by Academic Management Service (AMS) discussed later in this publication.

TAKE CAREFUL NOTE OF THE FOLLOWING:

1. If you owe the University any charges accrued from previous terms (i.e. tuition, parking fines, library fines, bookstore charges, etc.) you are REQUIRED to pay these charges, before you will be permitted to register.
2. If you are receiving any form of tuition assistance you must provide the Office of Student Accounts with properly approved tuition assistance forms and pay any balance by the PAYMENT DUE DATE or a late payment fee will be assessed.
3. If you are receiving any form of financial aid, your name MUST be on the award list submitted by the Financial Aid Office to the Office of Student Accounts, PRIOR TO PAYMENT DUE DATE. Deferments will be for only the amount of your award and you are REQUIRED to pay any balance by the PAYMENT DUE DATE. (This DOES NOT APPLY to loan programs where the check is not remitted directly to the University Financial Aid Office.) If you do not pay the difference by the payment due date a late payment fee will be assessed. LATE FINANCIAL AID APPLICANTS

MUST BE PREPARED TO MEET THE TUITION OBLIGATION THROUGH MEANS OTHER THAN FINANCIAL AID, BY THE PAYMENT DUE DATE.
4. The University may at its sole discretion cancel a student's registration for failure to meet financial obligations at any time.

Questions concerning financial policy and payment of tuition and fees should be directed to the Office of Student Accounts, Room 210, Administration Building, (804) 594-7060 or 594-7195.

Reinstatement for Fall Term 1995

Students who register during late registration, August 28, 1995, through September 1, 1995, must pay on the day they register. On September 1, 1995, the University will cancel the registration for all students who have registered from August 28, 1995, through September 1, 1995, and have not made financial arrangements. Beginning September 5, 1995, students whose registration was canceled on September 1, 1995, may be reinstated provided they pay the full amount of their financial obligation. Students may be reinstated from September 5, 1995, through September 8, 1995 for a reinstatement fee of $100.00 plus full tuition and fees and a $50.00 late payment fee. Students may be reinstated from September 11, 1995, through September 15, 1995, for a reinstatement fee of $200.00 plus full tuition and fees and a $50.00 late payment fee. REINSTATEMENTS WILL NOT BE PROCESSED UNLESS THE STUDENT HAS THE FULL FINANCIAL OBLIGATION. IF THE STUDENT PRESENTS THE UNIVERSITY WITH A CHECK THAT IS RETURNED FROM THE BANK FOR INSUFFICIENT FUNDS, THE STUDENT'S REGISTRATION WILL AUTOMATICALLY BE CANCELED AND NO FURTHER OPPORTUNITIES FOR REINSTATEMENT WILL BE PERMITTED. During the reinstatement period the student may not make any schedule changes, they will be reinstated for the original schedule only. REINSTATEMENT DOES NOT APPLY TO STUDENTS WHOSE REGISTRATION WAS CANCELED PRIOR TO AUGUST 28, 1995.

Questions concerning reinstatement should be directed to the Office of Student Accounts, Room 210, Administration Building, (804) 594-7195.

Academic Management Services (AMS) Tuition Payment Plan

If you desire to take advantage of an annual payment plan, you may do so through the Academic Management Services (AMS) Plan. This plan allows you to pay University fees in ten convenient monthly payments. The cost of this plan is $50 which includes Life Benefit Coverage.There are no fees or interest charges. When determining the amount to budget, please consider tuition and fees for FALL and SPRING terms, registration fees and applied music fees. You may use this plan if you are a full-time or part time student. YOU MAY NOT USE THIS PLAN FOR ONLY ONE TERM. Your fall term tuition and fees must be paid in full by the 5th payment, which you will make on October 1, 1995. If this payment does not pay your fall term charges, your transcript will be held and you will not be permitted to register for the spring term.

The University assesses a $50.00 late payment fee for EACH PAYMENT that is made to AMS late. This fee is payable directly to the University.

THE DEADLINE FOR SUBMITTING YOUR APPLICATION FOR THIS PLAN DIRECTLY TO AMS IS AUGUST 1, 1995. After August 1, 1995, you may still use this plan, however you MUST bring your completed AMS application along with your check and a stamped envelope to the University Cashiers Office. This will insure that the University is aware that you are using AMS prior to the payment due date. The FINAL DEADLINE for using the AMS plan is FRIDAY, SEPTEMBER 1, 1995.

You may contact AMS for questions concerning this plan at 1-800-635-0120.

Refund Policy

If the University cancels a course for which you have registered, you are entitled to a full refund for that canceled course. Please take careful note of the following.

Tuition and comprehensive fees will be refunded for the fall and spring terms according to the following policy:

100% for any course dropped on or before the last business day before the beginning of the academic term or for any course which is canceled by the University;

75% for any course dropped on the first day of the academic term through the end of the first week;

50% for any course you dropped during the second, third and fourth week of the academic term, after which there shall be no refund.

Refunds for Federal financial recipients will be processed in accordance with Federal Law.

For refund policies concerning Terms 2,3,4 and 5, please refer to the appropriate *Summer Registration Bulletin*.

You must make application to the Office of the Registrar to drop a course on or before the deadlines listed above and during normal business days of the University in order to be eligible for a refund. The Office of the Registrar will determine the number of credit hours for which you are entitled to a refund, and the date of your application determines the amount of your refund.

Refunds are normally submitted in batches to the Treasurer of the Commonwealth and you will receive refunds by check through the mail. Refunds take up to six weeks from the date the student officially makes the schedule change.

If you are participating in the AMS annual tuition payment budgeting plan and your payments received by the University exceed the amount you owe in accordance with the policy listed above, the University will refund you directly. Please do not attempt to obtain a refund from AMS directly. Please note that if you have budgeted through AMS for annual payment of your tuition and fees and must withdraw from the University after the fall term dates listed above, the refund that is due to you will be based on your registration for the fall term. You will receive a refund of all payments to AMS which exceed your obligation for the fall term, and you should contact AMS to cancel your payment plan. All refunds will be processed in accordance with the above policy. If you have extenuating circumstances, (such as mandatory job transfer from the area, documented by a letter from your employer, or extended period of hospitalization, documented by a physician's statement, etc.), you should contact the Office of Student Accounts, Room 210, Administration Building, (804) 594-7060 or 594-7195 to obtain a tuition refund appeal form. You will be notified of the final decision within two weeks of the date the appeal is filed.

All appeals must be filed by the end of the academic term to be considered. ANY APPEAL FILED AFTER THE END OF THE ACADEMIC TERM WILL BE DENIED REGARDLESS OF THE CIRCUMSTANCES.

Returned Checks

A RETURNED CHECK FEE OF $20.00 will be assessed for all checks returned from the bank to the University for any reason. An individual has seven (7) calendar days to repay the amount of the check and the returned check fee with cash, cashiers check, VISA or MASTERCARD.

If a check for tuition and fees is returned to the University from the bank for any reason there will be a $20.00 returned check fee. If the student does not repay the check and the fee before the payment due date a $50.00 late payment fee will be assessed in addition to the returned check fee. If the student does not repay the total amount due within seven (7) calendar days their registration will be canceled.

If a student who is being reinstated presents a check to the University that is returned by the bank for any reason, their registration WILL BE CANCELED IMMEDIATELY. Under no circumstances will they be permitted to return during that term.

If the University receives TWO non-sufficient fund checks from a student, the University will no longer accept checks from the student.

Delinquent Financial Obligations

You will be denied registration at the University if you have previously unmet financial obligations or if you have retained University property. If your account with the University becomes delinquent, the University may turn over the account for collection with a third-party collection agency, credit bureau, or with the Attorney General of the Commonwealth of Virginia. The University is allowed under Virginia law to attach your Virginia state income tax refund in the repayment of any debt which you may owe the University.

In the event of default, or the return of a check for insufficient funds, the student is responsible for all reasonable administrative costs, collection fees, and attorney's fees incurred in the collection

of the funds which are due to the University.

Notice to Students Receiving Financial Aid

If you plan to receive or are receiving financial aid, courseload reductions and additions can affect the amount of financial aid awarded to you. This is particularly true if you are a full-time student and a course reduction results in your becoming a part-time student. You will be responsible for any charges remaining after a coursework load change, and any amount due as a refund under the University refund policy may be refunded directly to the financial aid grantor, rather than to you, if the rules of the grantor so require. If you have received a financial aid award and must decrease your academic workload to fewer than nine credit hours, you must contact the Office of Financial Aid, Room 203, Administration Building.

Veterans Benefits

If you are a veteran, servicemember, or dependent using Veterans Administration education benefits, you must make financial arrangements at the time of registration. If you are using Veterans Administration education benefits for the first time, you should anticipate a delay of approximately eight weeks before the first education allowance check is mailed to you. You should contact the University's Office of Veterans' Affairs, located in Room 112 of the Administration Building, if you plan to use V.A. benefits. Telephone: (804) 594-7175.

Classification as an In-State Student

Students and applicants for admission who claim entitlement to in-state educational privileges, including in-state tuition rates, must demonstrate their eligibility in accordance with the provisions of Section 23-7.4 of the Code of Virginia set forth below. Applicants for admission who believe they qualify for in-state educational privileges should complete the Application for Virginia In-State Tuition Rates and return it with their applications for admission.

Students who are already enrolled at the University must apply for a change of status through the Office of Admissions. Such requests must be made on the Application for Virginia In-State Tuition Rates form. Inquiries should be addressed to the Office of Admissions, CNU, 50 Shoe Lane, Newport News, Virginia 23606-2998.

Eligibility for In-State Tuition Charges

A. For purposes of this section the following definitions shall apply:

Date of the alleged entitlement means the first official day of class within the term, semester or quarter of the student's program.

Dependent student means one who is listed as a dependent on the federal or state income tax return of his/her parents or legal guardian or who receives substantial financial support from his/her parents or legal guardian.

Domicile means the present, fixed home of an individual to which he/she returns following temporary absences and at which he/she intends to stay indefinitely. No individual may have more than one domicile at a time. Domicile, once established, shall not be affected by mere transient or temporary physical presence in another jurisdiction.

Domiciliary intent means present intent to remain indefinitely.

Emancipated minor means a student under age of eighteen on the date of the alleged entitlement whose parents or guardians have surrendered the right to his/her care, custody and earnings and who no longer claim him/her as a dependent for tax purposes.

Full-time employment means employment resulting in, at least, an annual earned income reported for tax purposes equivalent to fifty work weeks of forty hours at minimum wage ($8,500 per calendar year).

Independent student means one whose parents have surrendered the right to his/her care, custody and earnings, have ceased to support him/her, and have not claimed him/her as a dependent on federal and state income tax returns for at least twelve months prior to the date of the alleged entitlement.

Special arrangement contract means a contract between a Virginia employer or the authorities controlling a federal installation or agency located in Virginia and a public institution of higher education for reduced rate tuition charges as described in paragraph G of this section.

Substantial financial support means financial support in an amount which equals or exceeds that required to qualify the individual to be listed as a dependent on federal and state income tax returns.

Unemancipated minor means a student under the age of eighteen on the date of the alleged entitlement who is under the legal control of and is financially supported by either of his/her parents, legal guardian or other person having legal custody.

Virginia employer means an employing unit organized under the laws of Virginia or having income from Virginia sources regardless of its organizational structure, or any public or nonprofit organization authorized to operate in Virginia.

B. In order to become eligible for in-state tuition, an independent student shall establish by clear and convincing evidence that for a period of at least one year immediately prior to the date of the alleged entitlement, he/she was domiciled in Virginia and had abandoned any previous domicile, if such existed.

In order to become eligible for in-state tuition, a dependent student or unemancipated minor shall establish by clear and convincing evidence that for a period of at least one year prior to the date of the alleged entitlement, the person through whom he/she claims eligibility was domiciled in Virginia and had abandoned any previous domicile, if such existed.

In determining domiciliary intent, all of the following applicable factors shall be considered: continuous residence for at least one year prior to the date of alleged entitlement; state to which income taxes are filed or paid; driver's license; motor vehicle registration; voter registration; employment; property ownership; sources of financial support; location of checking or passbook savings accounts and any other social or economic relationships with the Commonwealth and other jurisdictions. Domiciliary status shall not ordinarily be conferred by the performance of acts which are auxiliary to fulfilling educational objectives or are required or routinely performed by temporary residents of the Commonwealth. *Mere physical presence or residence primarily for educational purposes shall not confer domiciliary status.*

Those factors presented in support of entitlement to in-state tuition shall have existed for the one year period prior to the date of the alleged entitlement.

C. The domicile of a married person shall be determined in the same manner as the domicile of an unmarried person.

The domicile of an emancipated minor shall be established in the same manner as any other independent student.

Any alien holding an immigration visa or classified as a political refugee shall also establish eligibility for in-state tuition in the same manner as any other student. However, absent Congressional intent to the contrary, any person holding a student or other temporary visa shall not have the capacity to intend to remain in Virginia indefinitely and, therefore, shall be ineligible for Virginia domicile and for in-state tuition charges.

The domicile of a dependent student shall be rebuttably presumed to be the domicile of the parent or legal guardian claiming him/her as an exemption on federal or state income tax returns currently and for the tax year prior to the date of the alleged entitlement or providing him/her substantial financial support.

A matriculating student who has entered an institution classified as out-of-state shall be required to rebut by clear and convincing evidence the presumption that he/she is in the Commonwealth for the purpose of attending school and not as a bona fide domicile.

For the purposes of this section, the domicile of an unemancipated minor or a dependent student eighteen years of age or older may be either the domicile of the parent with whom he/she resides or the parent who claims the student as a dependent for federal and Virginia income tax purposes for the tax year prior to the date of the alleged entitlement and is currently so claiming the student. If there is no surviving parent or the whereabouts of the parents are unknown, then the domicile of an unemancipated minor shall be the domicile of the legal guardian of such unemancipated minor unless there are circumstances indicating that such guardianship was created primarily for the purpose of conferring a Virginia domicile on the unemancipated minor.

D. *It is incumbent on the student to apply for change in domiciliary status to become eligible for*

such change. Changes in domiciliary status shall only be granted prospectively from the date such application is received.

A student who knowingly provides erroneous information in an attempt to evade payment of out-of-state fees shall be charged out-of-state tuition fees for each term, semester or quarter attended and may be subject to dismissal from the institution. All disputes related to the veracity of information provided to establish Virginia domicile shall be appealable through the due process procedure required by paragraph H below.

E. A non-military student whose parent or spouse is a member of the armed forces may establish domicile in the same manner as any other student. However, a non-military student, not otherwise eligible for in-state tuition, whose parent or spouse is a member of the military stationed or residing in the Commonwealth pursuant to military orders and claiming a state other than Virginia on their State of Legal Residence Certificate, shall be entitled to in-state tuition charges when the following conditions are met: (1) if the student is a child of a member of the armed forces, then the non-military parent shall have, for at least one year immediately prior to the date of alleged entitlement for in-state tuition charges, resided in Virginia, been employed full-time and paid individual income taxes to Virginia. Such student shall be eligible for in-state tuition charges only if the non-military parent claims him/her as a dependent for Virginia and federal income tax purposes; or (2) if the student is the spouse of a member of the armed forces, then such student shall have, for at least one year immediately prior to the date of alleged entitlement for in-state tuition, resided in Virginia, been employed full-time and paid individual income taxes to Virginia. Any student whose spouse or parent is a member of the armed forces shall be eligible for in-state tuition charges for so long as these conditions continue to be met.

F. Students who live outside this Commonwealth and have been employed full-time inside Virginia for at least one year immediately prior to the date of the alleged entitlement for in-state tuition shall be eligible for in-state tuition charges if such student has paid Virginia income taxes on all taxable income earned in this Commonwealth for the tax year prior to the date of the alleged entitlement. Students claimed as dependents for federal and Virginia income tax purposes who live outside this Commonwealth shall become eligible for in-state tuition charges if the non-resident parent claiming him/her as a dependent has been employed full-time inside Virginia for at least one year immediately prior to the date of the alleged entitlement and paid Virginia income taxes on all taxable income earned in this Commonwealth for the tax year prior to the date of the alleged entitlement. Such students shall continue to be eligible for in-state tuition charges for so long as they or their qualifying parent are employed full-time in Virginia, paying Virginia income taxes on all taxable income earned in this Commonwealth and the student is claimed as a dependent for Virginia and federal income tax purposes.

G. Public institutions of higher education may enter into special arrangement contracts with Virginia employers or authorities controlling federal installations or agencies located in Virginia. The special arrangement contracts shall be for the purpose of providing reduced rate tuition charges for the employees of the Virginia employers or federal personnel when the employers or federal authorities are assuming the liability for paying, to the extent permitted by federal law, the tuition for the employees or personnel in question and the employees or personnel are classified by the requirements of this section as out-of-state.

Special arrangement contracts with Virginia employers or federal installations or agencies may be for group instruction in facilities provided by the employer or in the institution's facilities or on a student-by-student basis for specific employment-related programs.

Special arrangement contracts shall be valid for a period not to exceed two years and shall be reviewed for legal sufficiency by the Office of the Attorney General prior to signing. All rates agreed to by the public institutions shall be at least equal to in-state tuition and shall only be granted by the institution with which the employer or the federal authorities have a valid contract for students for whom the employer or federal authorities are paying the tuition.

All such contracts shall be registered with the

State Council of Higher Education to assure accurate tabulation of the domiciles of the students.

All special arrangement contracts with authorities controlling federal installations or agencies shall include a specific number of students to be served at reduced rates. In any fiscal year, the total number of such students at all state-supported institutions of higher education shall not exceed one-half of one percent of the projected annual full-time equivalent student enrollment in the state-supported institutions of higher education.

Nothing in this subsection shall change the domiciliary status of any student for the purposes of enrollment reporting or calculating the proportions of general funds and tuition and fees contributed to the cost of education.

H. Each public institution of higher education shall establish an appeals process for those students who are aggrieved by decisions on eligibility for in-state tuition charges. The Administrative Process Act (SS9-6.14:1 et seq.) shall not apply to these administrative reviews. An initial determination shall be made. Each appeals process shall include an intermediate review of the initial determination and a final administrative review. The final administrative decision shall be in writing. A copy of this decision shall be sent to the student. Either the intermediate review or the final administrative review shall be conducted by an appeals committee consisting of an odd number of members. No person who serves at one level of this appeals process shall be eligible to serve at any other level of this review. All such due process procedures shall be in writing and shall include time limitations in order to provide for orderly and timely resolutions of all disputes.

Any party aggrieved by a final administrative decision shall have the right to review in the circuit court for the jurisdiction in which the relevant institution is located. A petition for review of the final administrative decision shall be filed within thirty days of receiving the written decision. In any such action, the institution shall forward the record to the court, whose function shall be only to determine whether the decision reached by the institution could reasonably be said, on the basis of the record, to be supported by substantial evidence and not to be arbitrary, capricious or otherwise contrary to law.

I. In order to ensure the application of uniform criteria in administering this section and determining eligibility for in-state tuition charges, the State Council of Higher Education shall issue and from time to time revise guidelines, including domiciliary status questions to be incorporated by all state institutions of higher education in their admissions applications. These guidelines shall not be subject to the Administrative Process Act (SS9-6.14:1 et seq.) of this Code.

An advisory committee, composed of ten representatives of the public institutions, shall be appointed by the Council each year to cooperate with the Council in developing the guidelines for determining eligibility or revisions thereof. The Council shall consult with the Office of the Attorney General and provide opportunity for public comment prior to issuing any such guidelines.

Procedure

Upon receipt in the Office of Admissions, your Application for Virginia In-State Tuition Rates form will be reviewed by a staff member for an initial determination. If the staff member disagrees with your own determination for in-state privileges, you will be contacted immediately and given an explanation of the determination.

Appeals

If you disagree with the original residence decision, you may request an immediate appeal orally or in writing, but it must be done within ten working days of being notified of the initial determination. A panel of three University officials will then review your appeal. You are welcome to forward any supporting documentation (e.g., income tax returns). The panel will respond to your appeal within five working days.

If you still disagree, you may request a final appeal. This appeal must be made in writing, addressed to the Director of Admissions, within five working days of the first appeal decision. Another panel of University officials will then convene to consider your appeal. A written determination will be sent to you by U.S. Registered Mail within five days of the hearing.

Should you disagree with the final determination, you then have 30 days to take this matter to Circuit Court.

Senior Citizens

The 1989 session of the Virginia General Assembly amended and reenacted the Senior Citizen's Higher Education Act of 1974. If you are a senior citizen you are permitted to register and enroll in courses as a full-time or part-time student for academic credit, without charge, if your taxable income for federal income tax purposes did not exceed $10,000 for the year preceding the year in which you wish to enroll. You may also without charge enroll in academic credit courses for audit purposes and you may enroll in non-credit courses offered by the University without regard to your income. You must meet the applicable University admissions requirements to participate in this waiver program, and the determination of the University's ability to offer a course which you seek to take is at the discretion of the University. The law passed by the General Assembly in the 1988 session requires the State Council of Higher Education to establish procedures to ensure that tuition-paying students are accommodated in courses before senior citizens participating in this program are enrolled. If you are an eligible senior citizen who has completed 75 percent of the requirements towards a degree, the University is authorized to make individual exceptions to such procedures as may be established by the Council of Higher Education. You are a senior citizen under this program if your sixtieth birthday falls before the term for which you are registering and you have been a legal domiciliary of Virginia for one year. Your free enrollment in credit courses under this program is limited by the law to no more than three courses in any term. There is no limit to the number of courses you may audit or on continuing education courses. The continuing education program welcomes the participation of senior citizens with the understanding that their registration is contingent on a minimum number of paying students to allow the course's formation. You may exceed the three course limit if you desire to pay for any additional courses. Your enrollment in this program is not limited with respect to the number of terms. Forms to request the senior citizen tuition waiver are available in the Office of Student Accounts. These forms must be completed each term.

Office of Financial Aid Administration
Room 203
(804) 594-7170
Director: Sidney P. Dugas
Assistant Director: Charles B. Edwards III
Assistant Director: Susan P. Glaude
Hours: Monday-Friday: 9:30 a.m.-4:00 p.m.

Christopher Newport University offers financial assistance to qualified graduate students who wish to defray part of their total University expenses. The University participates in several aid programs which are administered through the Office of Financial Aid.

Types of aid include loans and student employment. Although most financial aid programs are based on financial need, some use criteria other than financial need for eligibility. Applications and additional information are available from the Office of Financial Aid.

To be eligible for most financial aid programs, a student must: 1) be admitted as a classified graduate student; 2) be enrolled on at least a half-time basis; 3) be in good academic standing; and 4) be making satisfactory academic progress. Some programs, however, may require full-time enrollment.

Financial aid is awarded for one academic year only, but, upon re-application and continued eligibility, may be renewed for succeeding years. The priority filing date for applying for financial aid administered by Christopher Newport University is April 1 for consideration in the following academic year. Later dates are established on an annual basis for the Student Loan programs.

Entering students must be admitted to the University before receiving a decision letter regarding financial aid. Announcements of financial aid decisions for applicants filing on or before April 1 are normally made by June 30. Applicants for financial aid will be notified in writing by the Office of Financial Aid.

Application Requirements

To be considered for financial aid, applicants must:

1. Be enrolled or accepted for enrollment at the University as a classified student;
2. File an application for financial aid with the Christopher Newport University Office of Financial Aid. This application must be completed annually.
3. File a Free Application for Federal Student Aid (FAFSA), the results of which must be provided to the University's Office of Financial Aid (allow four to six weeks for processing). The FAFSA must be filed each year students apply for financial aid.

Financial Aid Available at Christopher Newport University

The following financial aid programs administered by the Financial Aid Office are available for graduate students at CNU:

Federal Work-Study (employment)
Federal Perkins Loans (formerly known as NDSL)

Student Loans From Commercial Lenders

Students who need assistance in addition to those programs listed above may want to consider the following student loan programs:

Federal Stafford Student Loans (FSSL)

Loans made under the Federal Stafford Student Loan Program are low-interest, long-term loans. Until recently, the FSSL was available only to students with financial need. Now this program is available to both, the needy and the non-needy students. As of July 1, 1994, this program was expanded and replaced the Federal Supplemental Loan Program (FSLS).

Students **with financial need** can obtain what is called a subsidized FSSL. That means the U.S. Department of Education will pay the interest charges to your lender in your behalf as long as you remain enrolled on at least a half-time basis and during the six to nine month period following enrollment (grace period). At the end of the grace period, repayment of the loan must begin and interest begins to accrue to the student borrower. Repayment may extend up to ten years but borrowers must make payments of at least $50 per month.

Students who do not qualify for the need-based (subsidized) FSSL can obtain an unsubsidized, non-need-based, loan. Unlike the subsidized FSSL, the **student** is responsible for the interest obligation while enrolled. The student, while enrolled on at least a half-time basis, may pay

interest only or have the interest capitalized (added to the principal).

Graduate students may borrow up to $18,500 per year of which up to $8,500 may be subsidized loans. **Remember, financial aid is limited to the cost of education, so students at CNU would not be able to obtain the full program limit because it exceeds the cost of education.**

The interest rate for **all borrowers** as of July 1, 1994, will be a variable rate with a cap of 8.25%. The rate will be adjusted each July 1 and will be based on the 91-Day Treasury Bill plus 3.10%. The rate through June 30, 1995, is 7.43%.

Federal regulations require the lender to send the loan check, made co-payable to the school and the borrower, to the school for delivery to the student. The loan **must** be disbursed in two equal payments. If the loan is for the school year, the first disbursement will be made at the beginning of the fall semester and the second disbursement at the beginning of the second semester. If the loan is for only one semester, half the loan will be disbursed at the beginning of the semester and the remainder will be disbursed at the mid-point of the semester. This includes summer loans. **The amount of the checks will be half the loan amount less an origination fee and Guarantee Fee.**

To be eligible to obtain a FSSL, a student must be admitted as a classified student attending on at least a half-time basis. To apply for an FSSL, either subsidized or unsubsidized, a student must complete a Free Application for Federal Student Aid (FAFSA) Form and a CNU Application for Financial Aid. A separate loan application is not necessary if a lender is selected from the lender list that is provided with the CNU Application for Financial Aid.

Short-term Emergency Loans:
The John Stephen Rasmussen Memorial Fund

This fund was established by the community in 1972, in memory of John Stephen Rasmussen, a 21-year-old student who lost his life in a fire while in the act of saving others. He was posthumously awarded a Carnegie Medal. Students may borrow, interest free, sums (funds permitting) for a period not to exceed 30 days. Applicants should present a valid Christopher Newport University student ID card when they apply to the University's Business Office.

Emergency Loan Fund

An emergency loan fund was established in 1967 by the sophomore class, in honor of former Christopher Newport University President James C. Windsor. Students may borrow, interest free, sums (funds permitting) for a period not to exceed 30 days. Applicants should present a valid Christopher Newport University student ID card when they apply to the University's Business Office. Emergency loans are limited to $25 per student.

Satisfactory Academic Progress

Students receiving financial aid must remain in good academic standing and must be making satisfactory academic progress toward the completion of their degree. For an explanation of what constitutes "good academic standing" and "satisfactory academic progress," please contact the Office of Financial Aid.

Estimated Costs

Budget planning for attendance at Christopher Newport University should consider both direct and indirect costs. Direct charges are tuition and fees. For such information, see the "Tuition and Fees" section of the catalog. Indirect costs are the normal expenses for living. Estimated living expenses are discussed in detail in the CNU Financial Aid Guide.

Additional Information

Students interested in receiving financial aid are strongly encouraged to obtain a copy of the CNU Financial Aid Guide and read it thoroughly. The Guide is available in the Office of Financial Aid.

Christopher Newport University Graduate Assistantships and Scholarships

For information on CNU graduate assistantships and scholarships contact the Program Coordinator or the Office of Graduate Studies.

Listed below is the notification of the Family Rights and Privacy Act of 1974. The University is to inform enrolled students annually of their rights under the terms of the Family Educational Rights and Privacy Act of 1974. The act does not apply to students admitted to the University who have not officially enrolled.

Policy Intent

1. The University student record policy is intended to conform with all state and federal statutes dealing with access to information held by an educational institution on present and former students.
2. The University student record policy is formulated to protect the privacy of that student information that is maintained, and yet provide access to student records for those having a legitimate purpose to view such records. The regulations and procedure to ensure adequate protection of the student are provided in this policy.
3. *Records* refers to those files and their contents that are maintained by official units of the University. Generally, students have the right to review any official record that the University maintains on them. Access to records by others, without student permission, is limited to purposes of an educational nature. When access is permitted, documents will be examined only under conditions that will prevent unauthorized removal, alteration, or mutilation. Information to which the student does not have access is limited to the following:

a) Confidential letters of recommendation placed in the student's files before January 1, 1975, and those letters for which student has signed a waiver of his or her right of access.
b) Parents' confidential financial statements.
c) Personal files and records of members of faculty or administrative personnel "which are in sole possession of the maker thereof and which are not accessible or revealed to any person except a substitute."
d) Records of the Admissions Office concerning students admitted but not yet enrolled at the University. Letters of recommendation are removed from the Admissions files before the files are forwarded to the Registrar's Office.
e) Medical-psychological records used in connection with treatment of the student. Such records are however, reviewable by a physician or psychologist of the student's choice; and
f) Office of Campus Police records, when utilized for internal purposes by those offices in their official capacities.

4. Only the following offices are authorized to release nondirectory information: President, Provost, Vice President for Student Services, Vice President for Administration and Finance, Vice President of Development, and Executive Assistant to the President.
5. Copies of this policy are available upon request from the Registrar, who is responsible for the administration of the student record policy.

Access to Student Records by the Student

1. Students have the right to inspect their records (as defined above) and are entitled to an explanation of any information therein.
2. Documents submitted to the University by or for the student will not be returned to the student. Normally, academic records received from other institutions will not be sent to third parties external to the University. Such records should be requested by the student from the originating institution.
3. Official records and transcripts of the University (signature and/or seal affixed) are mailed directly to other institutions or agencies at the student's request. When extreme circumstances warrant, official records may be given directly to the student at the discretion of the proper University official. In such cases, the record will be clearly marked to indicate issuance to the student.
4. Should a student believe his or her record is incorrect, a written request should be submitted to the appropriate University official indicating the correct information. The official will respond within a reasonable period concerning his or her action. Should the student not be satisfied, a hearing may be requested of the Registrar.

Access to Student Records by Others

1. Disclosure of general directory information: Certain information may be released by the University without prior consent of the student if considered appropriate by designated officials. Such information is limited to the following:

a) Student's name, address, telephone number (permanent and local).
b) Date and place of birth.
c) Dates of attendance at the University, field of concentration, current classification, degrees, honors and awards.
d) Previous schools attended and degrees awarded.
e) Height and weight of members of athletic teams.
f) Participation in officially-recognized activities.

2. Disclosure of directory information for commercial purposes:
By written request to the Registrar's office, students may request that directory information not be released. All other student information will be released only upon written request of the student, excepting those instances cited below.
3. Disclosure to members of the University community:

a) Access to student records for administrative reasons for faculty and administrative staff is permissible provided that such persons are properly identified and can demonstrate a legitimate interest in the materials.
b) Access for the purpose of research by faculty, administrative staff, and graduate students is permissible when authorized by the department head and the administrator of the office concerned.
c) Information requested by student organizations of any kind will be provided only when authorized by the Vice President for Student Services and/or the Director of Student Life.

4. Disclosure to Parents and Organizations Providing Financial Support to a Student:
It is the University's policy to release the academic transcript to parents and/or organizations only upon the student's written request or authorization. Otherwise, the academic transcript will be sent only to the student. This policy is consistent with the University's interpretation of the Family Education Rights and Privacy Act of 1974, popularly known as the "Buckley Amendment."
5. Disclosure to Other Educational Agencies and Organizations:
Information may be released to another institution of learning, research organization, or accrediting body for legitimate educational reasons, provided that any data shall be protected in a manner that will not permit the personal identification of the student by a third party.
6. Disclosure to Local, State, and Federal Governmental Agencies:
Government agencies are permitted access to student records only when auditing, enforcing, and/or evaluating sponsored programs. In such instances, such data may not be given to a third party and will be destroyed when no longer needed for audit, enforcement, and/or evaluative purposes.

COURSES OF INSTRUCTION

The following section contains a description of the Graduate Programs offered by the University. It is followed by a description of the participating departments, including a description of the individual courses of instruction. Course descriptions appear in ascending numerical order, with graduate courses numbered between 500 and 699 and undergraduate courses between 100 and 499.

The three hyphenated numbers enclosed in parentheses following the title of the course have the following meanings: the first number refers to the number of credit hours awarded for successful completion of the course; the second number refers to the number of weekly lecture hours in the course; and the third number refers to the number of weekly laboratory, practicum, or studio hours in the course. A course designated as (4-3-2), for example, refers to a four-credit course, which has three lecture hours and two laboratory/practicum/studio hours each week. Following the credit hours designation is an indication as to when that course is normally offered (e.g. Fall, Spring, etc.). Where such designations do not appear, please consult with the appropriate department chairman.

INDEPENDENT STUDY

The purpose of Independent Study (shown as SUBJ 599) is to enable qualified students to enrich their programs through directed reading or independent research, under faculty supervision and for University credit. Independent Study may be offered in a regular semester or during a summer session. Goals, prerequisites, stages and grading procedures are agreed upon in writing by the student and the faculty member directing the Independent Study. This should be done by the end of the pre-registration period for the semester/session in which the Independent Study is to occur.

Students may take a maximum of three credit hours of Independent Study in a given term/session, and a maximum of six credit hours in their total academic program. An Independent Study Form, available in the Office of the Registrar, must be completed by the student and the faculty member directing the Independent Study. Within five days of being signed by both parties, the Independent Study Form must be submitted to the appropriate program coordinator. Students must then present the completed and approved Independent Study Form to the Office of the Registrar at the time of registration for the purpose of enrollment.

TOPICS COURSES

Departments in addition to the ones listed in this catalog may, from time to time, offer topics courses (shown as SUBJ 595) at the graduate level. Consult the Registration News each semester for further information.

NOTICE

While the information provided in the following department entries is materially complete and correct at the time this Catalog goes to press, it is nonetheless the case that, pursuant to the reservation stated under "University Catalog Information" on the inside front cover of this document, the University may effect changes in these offerings, timetables and/or requirements during the period of applicability of this Catalog. Accordingly, students are advised to consult with the Director of Graduate Studies, the appropriate department chairperson or program coordinator concerning the official approval of any such changes and their effective dates of implementation.

The Master of Arts in Teaching (MAT) in Language Arts

The Master of Arts in Teaching (MAT) in Language Arts integrates pedagogy with the language arts disciplines. Building on introductory courses in learning theory, American society, and educational research, the specialty courses alert teachers to current theory and practice in several fundamental areas--reading and thinking about literature; the teaching of writing in various contexts and for differing purposes; the structure and acquisition of language; and critical thinking and study skills. These courses expand teachers' knowledge base and are designed to keep them abreast of developments in areas of particular interest, and also provide opportunities to try teaching methods appropriate to the course materials. The capstone seminar consists of the preparation of a portfolio of items representing the student's major learnings throughout the master's program. The portfolio will be presented to the examination committee as part of the final evaluation. Thus, this practitioner's degree is designed to strengthen teachers' content specialties and teaching skills.

Goals of the Program

The Master of Arts in Teaching Language Arts has been designed to prepare master teachers of the language arts. Broad goals for this MAT are to:

a. Enhance understanding of the human imagination as reflected in literary forms and artistic innovations.
b. Acquaint teachers with literature of interest to young readers and involve them in the productive study of literary technique and vision.
c. Illuminate significant events, social concerns, culture, and cultural groups comprising the human experience and examine their effects upon the individual.
d. Examine relationships between literature and such factors as locale, region, technology, ethnicity, gender, moral and religious values.
e. Enhance analytical thinking and vocabulary development through literary study and writing, both expository and creative.
f. Enhance the understanding and development of self-expression, both oral and written.
g. Enhance the understanding of the nature of language.
h. Improve knowledge of research resources and technological developments.

Admission Requirements

A detailed description of the requirements for admission and graduation appears in the Graduate Academic Policies section of this catalog. The following is a summary of the requirements as they pertain to this MAT degree program:

1. An official transcript from your baccalaureate institution, and a minimum grade point average of 3.00;
2. Official transcripts for all graduate work taken at other institutions.
3. Three letters of recommendation. Those having licensure must have letters from two professional educators: one who has observed the applicant's teaching and one who has served as principal or supervisor of the applicant. Those entering the program for licensure must have at least one letter from a person who can attest that the applicant is likely to be able to be successful in academic work at the graduate level.
4. Scores from the General Test of the Graduate Record Examination taken within five years prior to the date of admission.

Academic Prerequisites

Students will need to provide evidence of satisfactory completion of undergraduate courses ENGL 308, Approaches to Literature, and ENGL 309, Prose Writing, or their equivalents.

Additional requirements for students seeking licensure

Students who seek middle school or secondary licensure in addition to the MAT degree must comply with current Virginia requirements. Consequently, they must have undergraduate credit for the following areas:

English (freshman level)	6
Mathematics	6
Humanities	12
Social Science	12
Natural Science	8
Physical Education or Health	2

Most of these courses likely will have been completed with the baccalaureate degree. Psychology 211 or 309 must have been taken.

Secondary licensure requires an English major or its equivalent. Middle school licensure requires specific coursework in two of the following areas: mathematics, science, social studies, or language arts. Because of the MAT prerequisite requirements, one or both of the areas will be satisfied with completion of the graduate degree. The social studies and/or language arts areas may have been satisfied with the undergraduate programs and either of these areas may be selected as a second concentration. If one of these areas is selected as a concentration area, courses may be added to complete the number of credits required. Mathematics 309 is required for all middle school licensure. The licensure track is not available for the elementary concentration.

Prospective teachers must have earned passing scores on the communications skills and general knowledge tests of the National Teachers Examination before the internship semester. During the internship semester the professional knowledge and specialty area tests must be successfully completed.

Graduation Requirements

Requirements for graduation include the completion of the minimum course work hours for the appropriate track, a CNU graduate grade point average of at least 3.00, acceptance as a candidate for the degree (see page 17 of the Academic Policies section), a passing score on the comprehensive examination, a successful evaluation of the master's portfolio, and a successful internship if seeking licensure. An oral and written exit evaluation of the MAT program is also required. All requirements for the MAT degree must be completed within six years.

Curriculum

The MAT in Language Arts consists of three areas: Introductory, Specialty, Capstone and Application Courses. An outline of two tracks for students seeking the MAT degree with or without licensure is presented on the following page.

TWO TRACKS FOR THE MAT IN LANGUAGE ARTS

STUDENTS SEEKING THE MAT DEGREE WITH:	NO ADDITIONAL LICENSURE (Semester Hours)	LICENSURE FOR MIDDLE/SECONDARY ONLY (Semester Hours)
AREA I: INTRODUCTORY COURSES		
PSYC 500 Human Learning	3	3
EDUC 501 Multicultural Education	3	3
EDUC 502 Teachers as Researchers	3	3
	9	9
AREA II: SPECIALTY COURSES		
Specialty Courses (see below)	18	18
AREA III: CAPSTONE AND APPLICATION COURSES		
EDUC 696 Capstone Seminar	3	3
EDUC 521 Early Literacy (Elementary) OR	3	3
EDUC 522 The Integrated Curriculum (Middle/Secondary)		
EDUC 649 Advanced Instructional Strategies	3	3
	9	9
LICENSURE COURSES		
EDUC 510 Teaching Internship	0	6
EDUC 507 Foundations	0	1
EDUC 516 Middle School Curriculum & Instruction OR	0	3
EDUC 518 Secondary School Curriculum & Instruction		
EDUC 523 Teaching Reading and Writing	0	2
EDUC 535 The Exceptional Learner	0	2
EDUC 543 Classroom Management and Discipline	0	2
EDUC 544 Evaluation of Learning	0	2
	0	18
TOTAL	36	54

Specialty Courses		**Elementary**	**Middle/Secondary**
ENGL 510	Reading Southern American Literature (3)	3 Credits required	6 Credits required
ENGL 511	Reading Global Literature (3)		
ENGL 512	Reading Multicultural Literature (3)		
ENGL 520	The Reading and Writing of Poetry (3)	3 Credits required	6 Credits required
ENGL 521	Teaching Composition in Language Arts (3)		
ENGL 522	Teaching Writing in the Content Areas (3)		
ENGL 530	Advanced Grammar and Linguistics (3)	3 Credits required	6 Credits required
ENGL 531	Teaching English as a Second Language (3)	(ENGL only)	
PHIL 521	Teaching Critical Thinking and Study Skills (3)		
ENGL 514	Advanced Children's Literature (3)	3 Credits required	
Electives from the above courses		6 Credits required	

The Master of Arts in Teaching (MAT) in Mathematics and Science

The Master of Arts in Teaching (MAT) in Mathematics and Science is a practitioner-oriented degree designed to integrate pedagogy with specific academic subject areas. In addition, the program emphasizes research and theory related to human learning with an emphasis on critical thinking, an understanding of the multicultural differences among students and an understanding of education and life from an international perspective. The program is specifically designed to strengthen the content knowledge of teachers and to demonstrate teaching strategies appropriate to each concentration. The program is based on recognized needs in teacher education as identified by bodies such as the National Commission on Excellence in Education and The Holmes Group.

Goals of the MAT Program

As a practitioner's degree, the MAT program is designed to assist students in the development of specific qualities recognized in master teachers. The curriculum contributes to growth in the following areas of desirable teacher qualities:

a. Possession of well-grounded content knowledge;
b. An understanding of learning behavior;
c. An understanding of students' abilities and needs;
d. Demonstration of sound habits of the mind for creative and critical thinking and problem solving;
e. Knowledge of teaching strategies; and
f. Professional identity.

Tracks for Students Entering With or Without Licensure

Two tracks, based on different background preparation, are available. One track is intended for, but not limited to, currently licensed teachers; it leads to an MAT degree with no additional licensure. The other track is for persons who are not certified or who seek additional licensure at the middle school or high school level; it leads to an MAT degree with licensure. Elementary licensure courses are not available for students in the mathematics concentration.

Both tracks include an internship: the licensed teachers are supervised in their own classrooms, and the students seeking licensure teach under the supervision of a cooperating public school teacher as well as a CNU faculty member.

Admission Requirements

A detailed description of the requirements for admission and graduation appears in the Graduate Academic Policies section of this catalog. The following is a summary of those requirements as they pertain to the MAT program.

The following standards and criteria must be met for classified admission to the MAT program by students in either track:

1. A baccalaureate degree with a minimum grade point average of 3.00;

2. Three letters of recommendation. Those who are currently teaching must have letters from two professional educators: one who has observed the applicant's teaching and one who has served as a principal or supervisor of the applicant. Those entering the program for licensure must have at least one letter from a person who can attest that the applicant will be able to be successful in academic work at the graduate level;

3. Graduate Record Examination (GRE) scores taken within five years prior to the date of admission. GRE scores are used as one of several indicators of the applicant's ability to succeed in graduate studies; they are never the sole criterion for admission, nor is there a minimum acceptable or cutoff score.

Individual courses in the curriculum may be taken by students not pursuing an advanced degree at the University by registering as an unclassified student.

Academic Prerequisites

Students must meet the minimum requirements for the specific MAT program before taking courses in the program.

Students concentrating in science must have at least four semester courses in science, one course in mathematics and one in statistics. The science courses must include at least one lecture course from each of the following areas: biology, chemistry and physics; at least two of the four science courses must include a laboratory component.

Students concentrating in mathematics at the elementary and middle school level must have at least four semester courses in mathematics and two in science. The mathematics courses must include college algebra and elementary statistics. Students concentrating in mathematics at the secondary level must have a mathematics major or its equivalent.

Additional requirements for students seeking licensure

Students who seek middle school or high school licensure in addition to the MAT degree must comply with current Virginia requirements. Consequently, they must have undergraduate credit for the following areas:

English (freshman level)	6
Mathematics	6
Humanities	12
Social Science	12
Natural Science	8
Physical Education or Health	2

Most of these courses likely will have been completed with the baccalaureate degree. Psychology 211 or 309 must have been taken.

Middle school licensure requires specific coursework in two of the following areas: mathematics, science, social studies, or language arts. Because of the MAT prerequisite requirements, one or both of the areas will be satisfied with completion of the graduate degree. The social studies and/or language arts areas may have been satisfied with the undergraduate programs and either of these areas may be selected as a second concentration. If one of these areas is selected as a concentration area, courses may be added to complete the number of credits required. Mathematics 309 is required for all middle school licensure.

Prospective teachers must have earned passing scores on the communications skills and general knowledge tests of the National Teachers Examination before the internship semester. During the internship semester the professional knowledge and specialty area tests must be successfully completed.

Graduation Requirements

Requirements for graduation include the completion of the minimum course work hours for the appropriate track, a CNU graduate grade point average of at least 3.00, acceptance as a candidate for the degree (see page 17 of the Academic Policies section), a passing score on the comprehensive examination, a successful internship, and the successful defense of a thesis along with the presentation of five approved copies of the thesis to the Office of Graduate Studies. An oral and written exit evaluation of the MAT program is also required. All requirements for the MAT degree must be completed within six years.

Specialties, concentration, and tracks

The MAT degree described here has two specialty areas: mathematics and science. Concentration may be at the elementary, middle school, or secondary level for mathematics and the middle school level for science. Students entering the program without licensure may select a single content field or combine courses from two specialty fields. Students who wish to be licensed in both mathematics and science must complete a minimum of 15 hours in mathematics and 16 hours in science. The core graduate level courses or their equivalents in both disciplines will be required of all students choosing to certify in both specialties.

Curriculum

An outline of two tracks for students seeking the MAT degree with or without licensure is presented on the following page. The actual plan of study for individual students will be determined by the student's advisor. The academic background of the student will be taken into consideration in determining the student's program. However, all students must successfully complete courses from each of three areas: Introductory, Specialty and Capstone. Students seeking licensure will take additional professional courses, including a supervised internship.

TWO TRACKS FOR THE MAT IN MATHEMATICS AND SCIENCE

STUDENTS SEEKING THE MAT DEGREE WITH:	NO ADDITIONAL LICENSURE (Semester Hours)	LICENSURE FOR MIDDLE/HIGH SCHOOL ONLY (Semester Hours)
AREA I: INTRODUCTORY COURSES		
PSYC 500 Human Learning	3	3
EDUC 501 Multicultural Education	3	3
EDUC 502 Teachers as Researchers	3	3
	9	9
AREA II: SPECIALTY COURSES		
Specialty Courses (see below)	15	15
Advanced Educational Strategies with Internship, MATH 570 or PHYS 689	3	0
	18	15
AREA III: CAPSTONE AND THESIS		
EDUC 695 Capstone Seminar	1	1
Thesis	6	6
	7	7
LICENSURE COURSES		
EDUC 510 Teaching Internship	0	6
EDUC 507 Foundations	0	1
EDUC 516 Middle School Curriculum & Instruction OR EDUC 518 Secondary School Curriculum & Instruction	0	3
EDUC 523 Teaching Reading and Writing	0	2
EDUC 535 The Exceptional Learner	0	2
EDUC 543 Classroom Management and Discipline	0	2
EDUC 544 Evaluation of Learning	0	2
	0	18
TOTAL	34	49

LIST OF SPECIALTY COURSES
(# Required for Elementary, † Required for Middle School, * Required for Secondary)

Science Specialty Courses

BIOL 582	Life †
BIOL 582L	Life Laboratory †
BIOL 583	General Ecology
BIOL 583L	General Ecology Laboratory
BIOL 584	The Environment
BIOL 584L	The Environment Laboratory
BIOL 585	Marine Biology
BIOL 585L	Marine Biology Laboratory
BIOL 587	Physical Geology

Science Specialty Courses con't.

BIOL 588	Historical Geology
BIOL 588L	Historical Geology Laboratory
BIOL 589	Oceanography
BIOL 589L	Oceanography Laboratory
PHYS 581	The Universe †
PHYS 581L	The Universe Laboratory †
PHYS 582	Energy and the Environment
PHYS 583	High Technology in Contemporary Applications
PHYS 584	The Development of Scientific Thought
PHYS 689	Advanced Instructional Strategies in Science Teaching †(only required for already certified teachers)

Mathematics Specialty Courses

MATH 570	Advanced Instructional Strategies in Mathematics # †*
MATH 572	Current Issues in School Mathematics †
MATH 573	History of Mathematics
MATH 574	Discrete Mathematics
MATH 575	Computer Software & Calculators in School Mathematics
MATH 576	Mathematical Connections †
MATH 578	Elementary Geometry from an Advanced Viewpoint # †
MATH 579	Modern Analysis *
MATH 581	A Second Course in Abstract Algebra *
MATH 582	Introduction to Topology *
MATH 583	Mathematics Across the Curriculum #
MATH 584	Mathematics Cognition #

The Master of Science in Applied Physics

The Master of Science in Applied Physics, a thirty credit-hour program, is built around a core of physics and computer science courses that are the foundation of the three areas of concentration: instrumentation and advanced computer systems, dynamical systems and solid state systems. Five courses make up the core curriculum: Models of Dynamical Systems (PHYS 501), Data Acquisition and Instrumentation (PHYS 503), Electromagnetic Theory (PHYS 504), Software System Design and Implementation (CPSC 501), Communications I (CPSC 502). These courses are the basis for the design of both the hardware and software for systems of instrumentation and analysis. Each of the three concentrations requires four of the five core courses, plus five concentration courses and a thesis that includes a capstone seminar.

The special feature of the coursework in the master's degree program is its emphasis on applications, laboratory experience, and extensive use of computer software and hardware. All of the courses make extensive use of computers or require significant laboratory experimentation. The capstone seminars for the concentrations, Computer Systems Design (CPSC 619), Instrumentation Systems Design (PHYS 629), Design of Integrated Computational Environments (PHYS 649) and Design of Solid State Systems and Sensors (PHYS 639), tie these elements securely together and are an integral part of the thesis.

Goals of the Program

The program's overall goal is to provide its graduates with the scientific background and technical tools to:

1. Understand and critically evaluate other scientists' work;
2. Present logically and clearly the results of their own scientific investigation;
3. Advance an experimental technique, extend the application of a theory, or produce new data or observations; and
4. Design, build and evaluate a system of instrumentation, computers, software and/or graphical computer interfaces to stated specification.

The Applied Physics program is designed to serve students with a baccalaureate degree in applied physics, computer science, electrical and/or computer engineering and mathematics, or students who want advanced study in the electronic or optical properties of materials, computer systems or computer controlled instrumentation.

The emphasis of the program on experimentation, instrumentation and computer analysis is important. The CNU master's degree program is designed to produce graduates ready to make strong contributions to the professions and, if they so desire, to continue toward a Ph.D. degree in applied physics, computer engineering or computer science. For example, the solid state systems track was designed in response to The Report on Material Science and Engineering for the 1990s by the National Research Council. Over 30% of all employed physicists, astronomers and chemists work in the area of material properties, and the report documents the failure of the current curricula to deal with this subject in a satisfactory manner.

Admission Requirements

To be accepted as a classified student in the master's program, applicants are expected to have a baccalaureate degree with a grade point average of at least 3.0 (on a 4.0 scale) in their major undergraduate program. All applicants must submit transcripts of their undergraduate record, three letters of recommendation from people who know the applicant's capabilities, and scores for the aptitude part of the Graduate Record Examination taken within five years prior to the date of admission. International applicants from non-English speaking countries must submit their TOEFL scores. Applicants wishing to be considered for a teaching assistantship must apply by May 1 for the following fall semester. Research Assistantships are generally only awarded to second year students.

Memorandum of Understanding

Christopher Newport University has a Memorandum of Understanding with Longwood College for a dual degree program leading to a B.S. in Physics from Longwood College and an M.S. in Applied Physics from CNU.

Academic Prerequisites

All applicants should have completed a three semester sequence in physics, including modern physics and at least two labs; a five semester sequence in mathematics including calculus, linear algebra and differential equations; programming including data structures; a course in computer organization and architecture; and a course with a lab in circuit analysis. It is assumed that these courses are at least at the level of the following texts: Serway, Classical and Modern Physics; Boyce and DiPrima, Ordinary Differential Equations; Dale, Lilly and Weems, Pascal Programming; Aho, Hopcroft and Ullman, Data Structures; Mano, Computer Engineering; Hayt and Kemmerly, Circuit Theory. An accelerated schedule of undergraduate prerequisites can be arranged for applicants whose qualifications do not entirely satisfy the prerequisites for graduate study. Good computer programming skills are critical to a student's success in many of the courses, especially those with the CPSC prefix.

Applicants who have completed interesting research or design projects as undergraduates or as a part of their work are invited to submit descriptions of such projects as support for their application.

Graduation Requirements

Requirements for graduation include the completion of the minimum course work hours for the appropriate concentration, a CNU graduate grade point average of at least 3.00, acceptance as a candidate for the degree (see page 17 of the Academic Policies section), a passing score on the comprehensive written examination dealing with material from the core courses. A thesis is required. Students must defend their thesis at an oral examination before a panel of faculty and invited guests, and must present five approved copies of the thesis to the Office of Graduate Studies. An oral and written exit evaluation of the M.S. program is also required. All requirements for the M.S. in Applied Physics degree must be completed within six years.

Curriculum

Each student's curriculum is arranged with the student's advisor. The general requirements listed below are guides and serve as models for students' planning for each of the three departmental concentrations. Graduate course offerings by other colleges in the area may also form a part of a student's program, giving the student a rich resource of courses from which to set a curriculum.

MS: APPLIED PHYSICS

Requirements:

1. 30 Semester hours minimum (12 hours of core courses; 12 hours of specialty courses in an area of concentration; 6 hours of thesis of which three hours are from a design course listed below with an asterisk in each concentration);
2. Written comprehensive exam on the core and the prerequisite undergraduate courses;
3. Written thesis and oral defense of the thesis.

Core courses:

PHYS 501 Models of Dynamical Systems (1st semester)
PHYS 503 Data Acquisition and Instrumentation (1st semester)
PHYS 504 Electromagnetic Theory (2nd semester)
CPSC 501 Software System Design and Implementation (1st semester)
CPSC 502 Communications I (Computer Networks) (2nd semester)

Specialty courses and design courses for the concentrations:

Instrumentation and Advanced Computer Systems

CORE: PHYS 501, PHYS 503, CPSC 501, CPSC 502
PHYS 521 Computer Architecture
PHYS 522 Microprocessor-based Systems
CPSC 621 Parallel Processing
and either :
PHYS 621 Digital Signal Processing
PHYS 629 Instrumentation Systems Design*
or:
CPSC 611 Communications II
CPSC 619 Computer System Design*

Dynamical Systems

CORE: PHYS 501, PHYS 504, CPSC 501, CPSC 502
PHYS 502 Quantum Physics
PHYS 506 Thermodynamics and Statistical Physics
MATH 580 Advanced Numerical Analysis
PHYS 641 Computational Physics
PHYS 649 Design of Integrated Computational Environments*
CPSC 642 Qualitative Modeling (suggested elective course)

Solid State Systems

CORE: PHYS 501, PHYS 503, PHYS 504, CPSC 501
PHYS 502 Quantum Physics
PHYS 506 Thermodynamics and Statistical Physics
PHYS 631 Physics of Solids
PHYS 639 Design of Solid State Systems and Sensors*
and either:
PHYS 531 Optical Physics
PHYS 632 Lasers and Photonics
or:
PHYS 634 Superconducting Materials and Devices

MS: APPLIED PSYCHOLOGY

The Master of Science in Applied Psychology

The Master of Science in Applied Psychology with a concentration in Industrial/Organizational Psychology is a terminal degree program designed to train graduate students to apply the concepts, methods, principles and knowledge of psychology to people at work. This master's program uses the scientist-practitioner model to develop knowledge and skills in the application of psychological principles to enhance organizational functioning from both the organizational and human perspectives.

Graduates of the program will work in human resource and personnel areas such as selection, training, program evaluation, job analysis, testing, work motivation, group processes, performance appraisal, test validation, organization development, teambuilding, work performance enhancement, leadership development, and job design. This program is not a subdoctoral program that prepares graduates for a doctoral program but rather prepares graduates for professional positions in work organizations.

Goals of the Program

The curriculum of this program will contribute to the achievement of instructional goals in the following areas:

1. Content knowledge of the core areas within psychology:
   a. Biological bases of behavior;
   b. Principles of behavior acquisition and change;
   c. Principles of social behavior;
   d. Individual or unique bases of behavior.
2. Methodology of psychology:
   a. Research design and skill in designing field research;
   b. Statistics;
   c. Psychometric theory;
   d. Computer analysis of research data;
   e. Use and interpretation of survey and measurement instruments;
   f. Communication of knowledge through written and oral channels.
3. Design and implementation of selection programs, training programs, job design, performance appraisal, survey instruments, organizational assessment and diagnosis, supervisory training and other organizational programs.
4. Application of knowledge of the discipline to work settings.

Admission Requirements

A detailed description of the requirements for admission and graduation appears in the Graduate Academic Policies section of this catalog. The following is a summary of the requirements as they pertain to this MS degree program:

1. An official transcript from your baccalaureate institution, and a minimum grade point average of 3.00 and a psychology course grade point average of at least 3.00.
2. Official transcripts for all graduate work taken at other institutions.
3. Three letters of recommendation.
4. Combined Graduate Record Examination Scores of 950 or higher on the quantitative and verbal sections, and Graduate Record Examination Advanced Psychology scores, all taken within five years prior to the date of admission.
5. An essay, not to exceed two double spaced typewritten pages in length, describing your interest in I/O Psychology. Include a discussion of specific topics areas, research interests, and/or applications that are of interest to you. Feel free to describe the ways in which this degree fits into your career objectives.

Students applying for unclassified status must submit official undergraduate transcripts with a 2.5 or higher G.P.A.

Academic Prerequisites

Students will need to provide evidence of satisfactory completion of undergraduate courses in statistics, introductory psychology, experimental psychology (research methodology), and one of the following courses: physiological psychology, sensation and perception, history and systems of psychology, tests and measurements, or motivation.

Unclassified students must obtain consent of the instructor before enrolling. The instructor will determine whether the student has the academic background prerequisites for the specific course.

Graduation Requirements

Requirements for graduation include the completion of the minimum course work hours for the concentration, a CNU graduate grade point average of at least 3.00, acceptance as a candidate for the degree (see page 17 of the Academic Policies section), an appropriate practicum, a passing score on the general core examination, and the successful defense of a thesis along with the presentation of five approved copies of the thesis to the Office of Graduate Studies. An oral and written exit evaluation of the M.S. program is also required. All requirements for the M.S. degree must be completed within six years.

Curriculum

The graduate program follows the scientist-practitioner model in psychology. This means the students will be given a strong foundation in psychological theory and research as well as the knowledge, skills, and abilities to apply psychology to organizational settings. The Council for Applied Masters Programs in Psychology recommends that students have a background in the more traditional areas of psychology as well as in the specialty area. The curriculum for this masters program has been designed to fulfill this objective. The curriculum includes core courses that expose graduate students to the core topics in psychology and concentration courses that focus on the application of psychological theory and research in organizational settings.

Core Courses:

PSYC 501 Advanced Statistics for Social Science Research
PSYC 504 Advanced Social Psychology
PSYC 505 Social Perception, Learning and Cognition: Problem Solving and Decision Making
PSYC 595 Advanced Topics in Psychology
PSYC 601 Advanced Research Methods
PSYC 610 Advanced Test and Measurements
PSYC 699 Thesis Research

Concentration Courses:

PSYC 503 Training and Development in Organizations
PSYC 513 Group Dynamics
PSYC 523 Organizational Theory
PSYC 623 Organizational Psychology
PSYC 633 Advanced Personnel Psychology
PSYC 691 Graduate Practicum in Industrial/Organizational Psychology

The Master of Science in Environmental Science

The Master of Science in Environmental Science is a degree program designed for current and prospective employees in the new, rapidly growing field of environmental monitoring and conservation. This master's program will provide a solid background in ecological and environmental conservation theory as well as the skills required for employment with environmental assessment/monitoring businesses and state governmental agencies. The courses would also be relevant to teachers, particularly middle and high school teachers.

Graduates of the program will be qualified for further graduate work and for work in agencies such as Parks and Recreation, Game and Inland Fisheries, Natural Heritage, Water Control Board, Natural Resources, Marine Resources.

Goals of the Program

The curriculum of this program will contribute to the achievement of instructional goals in the following areas:

1. Solid background in ecological and environmental conservation theory.
2. Skills required for employment with environmental assessment/monitoring businesses and state governmental agencies.
3. Research and technical writing skills.
4. Preparation for further graduate work.

Admission Requirements

A detailed description of the requirements for admission and graduation appears in the Graduate Academic Policies section of this catalog. The following is a summary of the requirements as they pertain to this MS degree program:

1. An official transcript from your baccalaureate institution, and a minimum grade point average of 3.00.
2. Official transcripts for all graduate work taken at other institutions.
3. Three letters of recommendation.
4. Scores from the Graduate Record Examination taken within five years prior to the date of admission.

Academic Prerequisites

Students will need to provide evidence of satisfactory completion of the following undergraduate courses: complete sequences of general and organic chemistry, college physics, general ecology, botany, zoology, cell or molecular biology, genetics, microbiology, statistics, and a basic computer course.

Graduation Requirements

Requirements for graduation include the completion of the minimum course work hours for the concentration, a CNU graduate grade point average of at least 3.00, acceptance as a candidate for the degree (see page 17 of the Academic Policies section), a passing score on the comprehensive examination, and the successful defense of a thesis along with the presentation of five approved copies of the thesis to the Office of Graduate Studies. An oral and written exit evaluation of the M.S. program is also required. All requirements for the M.S. in Environmental Science must be completed within six years.

Specialty Tracks

Initially, a single general track, General Environmental Studies, is being offered. Three additional tracks, Urban Environmental Studies (considering environmental problems of special relevance to urban areas, such as pest control and population dynamics), International Environmental Studies (considering world environmental problems and allowing for international study) and Environmental Chemistry will be phased in as adequate preparations are made and student demand dictates. Urban and International Environmental Studies will be offered in conjunction with the CNU departments of Economics, Sociology, Government and Geography.

General Environmental Studies Track

This track is designed for students planning to pursue a Ph.D., for teachers wanting an M.S. in a biological science, and for students interested in careers with governmental agencies; consequently, it is flexible enough to fit the interest and needs of a wide variety of students. The core courses are those mentioned most frequently by employers, consultants and educators as those

needed for successful employment. The remainder of the course offerings are designed to enhance the understanding of ecology and the natural history of organisms. Many of these courses involve or even consist entirely of field work since the majority of the employers surveyed in preparation for the degree mentioned that a first-hand knowledge of the environment and environmental assessment methods are critical, but often missing.

Curriculum

The Master of Science in Environmental Science is a degree program which consists of a minimum of thirty hours of courses and six hours of thesis. An oral defense of the thesis is required. Most of the courses feature a prominent laboratory or field component in order to teach analytical and practical skills, while other courses are designed to build research and technical writing skills. A major and unique component of this program is the four-week technique-intensive summer field camp. Most courses beyond the core courses can be taken in any sequence. This degree program is designed so that full-time students can finish the program in two years.

Core Courses

BIOL 510, 510L	Biometry & Biometry Laboratory
ENVS 505	Technical and Scientific Writing
ENVS 520	Conservation and Mitigation Methods Seminar
ENVS 522	Summer Field Studies

Concentration Courses

BIOL 530	Biogeography
BIOL 534	Marine Ecology
BIOL 538	Limnology and Aquatic Biology
CHEM 545	Instrumental Methods in Chemistry
CHEM 555	Environmental Instrumental Analysis
CHEM 585	Advanced Instrument Analysis
ENVS 532	Wetlands Ecology
ENVS 536	Terrestrial Ecology
ENVS 540	Environmental Microbiology
ENVS 588	Environmental Geology
ENVS 589	Soil Science
ENVS 590	Topical Seminars in Environmental Science

The Master of Science in Nursing

The Master of Science in Nursing program focuses on preparing nurses to practice in the advanced role of nurse case manager. The role of case manager is at the forefront of a new health care model called "managed care." Managed care is a process of service planning and coordination designed to increase control over health care costs, insure quality health care, influence health care decisions, and achieve quality client outcomes. Clinical specialization will focus on managing the care of clients who require either episodic (direct) or brokered (indirect) care.

Goals of the Program

The curriculum of this program contributes to the achievement of instructional goals in the following areas:

1. Select theories from nursing and supporting sciences to design service plans for clients that achieve quality outcomes for clients and control the use of resources.
2. Implement research studies that add to the scientific basis for the practice of nursing case management.
3. Provide leadership in the role of nurse case manager to promote nursing practice; influence health care decision, increase control over cost for health care and insure quality health care.
4. Assume responsibility for contributing to the development of a health care delivery system that is accessible and equitable.
5. Assume responsibility for contributing to the advancement of nursing within the health care delivery system.

Admission Requirements

A detailed description of the requirements for admission and graduation appears in the Graduate Academic Policies section of this catalog. The following is a summary of the requirements as they pertain to this MS degree program:

1. A baccalaureate degree in nursing from an NLN accredited school of nursing.
2. Two academic and one professional recommendations.
3. A license to practice professional nursing in Virginia.
4. A minimum of one year of clinical nursing practice, and appropriate malpractice insurance.
5. An official transcript from your baccalaureate institution, and a minimum grade point average of 3.00.
6. Official transcripts for all graduate work taken at other institutions.
7. Completed undergraduate courses in health assessment, computer science, statistics, and ethics with a minimum grade of "C".
8. Documented evidence of ability to take part in learning experiences that develop the skills expected of the nurse case manager at the micro level including but not limited to: collecting and recording data about the client's condition, preparing and administering oral and parenteral medications, applying dressings, moving clients in and out of bed with assistance, performing CPR alone and with assistance, using therapeutic oral communication skills.
9. Documented evidence of ability to take part in learning experiences that develop the skills expected of the nurse case manager at the macro level including but not limited to: collecting and recording data about the clients, using computers to input and access data, performing complex statistical calculations, using oral and written communications.

Graduation Requirements

Requirements for graduation include the completion of the minimum course work hours for the concentration, a CNU graduate grade point average of at least 3.00, acceptance as a candidate for the degree (see page 17 of the Academic Policies section), a passing score on the comprehensive examination, and the successful defense of a thesis along with the presentation of five approved copies of the thesis to the Office of Graduate Studies. An oral and written exit evaluation of the MAT program is also required. All requirements for the M.S. in Nursing must be completed within six years.

Curriculum

The program of study is divided between graduate level courses in nursing (28 credit hours which includes 6 hours of thesis) and other disciplines (12 credit hours). The course work integrates theory from the disciplines of nursing,

finance, psychology, and computer science. Students are expected to develop skills and interact competently with computerized technology. Toward that goal, students will be provided accounts and introduced to the Internet and BITNET systems for information gathering and retrieval. Students will be introduced to various software systems available for use within health care. This includes applications related to finance, order entry, data storage and retrieval, and patient tracking systems.

Curriculum for First Year of Study
(Part-time study is available)

First Semester (Fall)

NURS 520 Nursing Research Methods (3-3-0)
PSYC 523 Organizational Theory (3-3-0)
PSYC 501 Advanced Statistics for Social Science Research (3-3-0)

Second Semester (Spring)

NURS 510 Nursing Theory (3-3-0)
*FINC 535 Health Care Finance (3-3-0)
*CPSC581 Computer Applications for Health Care Professionals (3-3-0)

Curriculum for Second Year of Study

Third Semester (Fall)

*NURS 530 Health Care Delivery System (3-3-0)
*NURS 540 Nursing Case Management I: Micro Level (5-3-6)
*NURS 699 Thesis Research (3-3-0)

Fourth Semester (Spring)

*NURS 550 Nursing Case Management II: Macro Level (5-3-6)
*NURS 560 Seminar in Long & Short Term Care Needs (3-3-0)
*NURS 699 Thesis Research (3-3-0)

* Pending approval of the Graduate Faculty Council and the University Provost.

Department of Arts and Communication

(College of Arts and Humanities)
McMurran Hall
(804) 594-7089

Chairman: Dr. Rita C. Hubbard

Faculty

PROFESSORS: Clyde W. Brockett, Ph.D.; James R. Hines, Ph.D.; Rita C. Hubbard, Ph.D.; Bruno A. Koch, Ph.D.
ASSOCIATE PROFESSORS: David F. Alexick, Ph.D.; Craig A. Newburger, Ph.D.
ASSISTANT PROFESSORS: Jennifer M. Barker, Ph.D.; Gregory A. Henry, M.F.A.; Naum Panovski, Ph.D.; Belle L. Pendleton, Ph.D.;Terrilyn Phillips, Ph.D.; Mark U. Reimer, Ph.D.
INSTRUCTORS: Betty L. Anglin, B.A.; George J. Hillow, M.F.A.

About the Department

The Department of Arts and Communication houses the disciplines of art, music, theatre, speech communication, and dance. It views the arts critically and historically as they provide a living record of human experiences and perceptions. The arts today represent a continuation of the past, and students working toward their chosen goals of artistic creation acquire both technical expertise and historical understanding.

A Bachelor of Arts degree in fine and performing arts is offered with concentrations in art, communication arts, music, theatre, or music-theatre, and the Bachelor of Music degree. Minor programs are offered in the study in art, music, speech communication, and theatre. The Professional Communication Certificate Program, consisting of selected courses in English and speech communication, is also available.

The department is also involved in education related activities and alliances with public schools, such as supervising student teachers, judging contests, and offering teacher workshops. It sponsors the Summer Institute for the Arts jointly with the Newport News Public Schools each year.

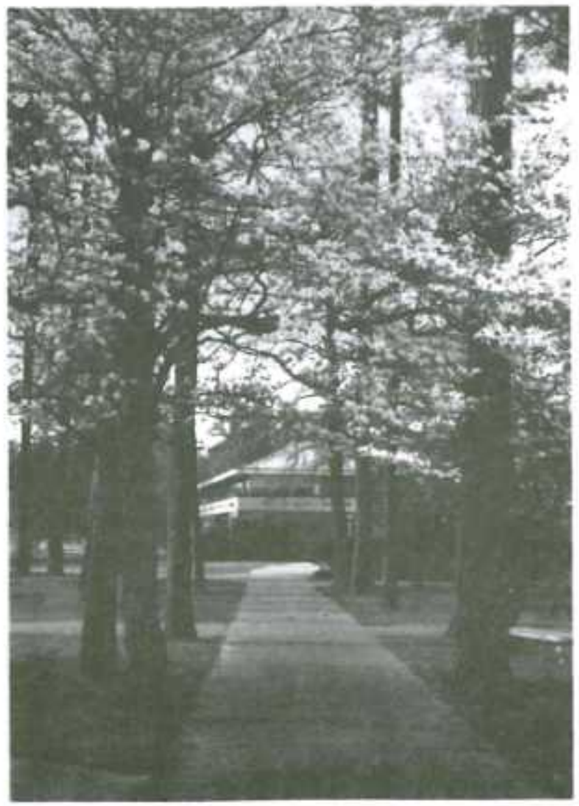
Faculty engage in professional development as they produce art, music, theatre, and scholarly research. The department offers a drama series, a concert series, and a seven-show rotation in the Falk Art Gallery each year.

Courses of Instruction

MUSC 507. American Music (3-3-0)
A course in which music is studied as a part of America's cultural history. Beginning with music transported to the New World by the Pilgrims and the Puritans, musical activity is traced chronologically into the twentieth century. Among major topics discussed are the singing school movement, nineteenth-century popular music, the development of music education, American band music, the beginnings of jazz, the establishment of an indigenously American expression, and the coming of world prominence in music of the twentieth century.

MUSC 509. Collegium Musicum (3-2-2)
A course for any who desire to learn to prepare and perform early music. It is both a class and an ensemble devoted to performing medieval and early Renaissance music, primarily vocally. Preparation for such performance entails the selection, transcription, and adaptation of the music and translation of texts from printed and microfilm facsimiles in the library.

MUSC 595. Advanced Topics in Arts and Communication (Credit varies)
Course topics will be selected on the basis of faculty and student interests.



Department of Biology, Chemistry and Environmental Science

(College of Science and Technology)
New Science Building, Room 218
(804) 594-7126

Chairman: Dr. Harold N. Cones

Faculty

PROFESSORS: David A. Bankes, Ph.D.; C. Ken Chang, Ph.D.; Harold N. Cones, Ph.D.; Gary G. Hammer, Ph.D.; Ronald S. Mollick, Ph.D.; Lee C. Olson, Ph.D.; James R. Reed, Jr., Ph.D.
ASSOCIATE PROFESSORS: Richard W. Cheney, Jr., Ph.D.; Mark S. Gray, Ph.D.;T. Edward Weiss, Jr., Ph.D.
ASSISTANT PROFESSORS: Cecile Andraos-Selim, Ph.D.; Robert B. Atkinson, Ph.D.; Kathleen Brunke, Ph.D.; Harold J. Grau, Ph.D.; Charlotte L. Otts, Ph.D.; Barbara A. Savitzky, Ph.D.; Gary J. Whiting, Ph.D.

Emeritus Faculty

Robert J. Edwards, Ph.D., Professor Emeritus; Aletha S. Markusen, Ph.D., Professor Emerita; Jean E. Pugh. Ph.D., Professor Emerita; Lawrence J. Sacks, Ph.D., Professor Emeritus; Ruth O. Simmons, M.Ed., Assistant Professor Emerita; E. Spencer Wise, Ph.D., Professor Emeritus.

About the Department

The Department of Biology, Chemistry and Environmental Science offers a broad spectrum of courses suitable for an undergraduate BS and BA degree, teacher recertification, the science specialty of the MAT degree and the Master of Science in Environmental Science degree. Undergraduate course offerings are divided into tracks, each with specific upper-level biology courses and supportive lower-level courses. Undergraduates may specialize in botany, cell biology and biochemistry, environmental science, horticulture, premedical/preveterinary/predental, secondary education, zoology, and, may minor in biology or chemistry. The departmental faculty is actively engaged in teaching and research and encompasses a depth and breadth of scholarly activity far greater than its numbers would indicate.

All departmental course offerings are taught in a new 14,000 square foot biology/chemistry building containing 14 modern and exceptionally well-equipped laboratories and 21 support areas. Three walk-in controlled environment chambers and a new greenhouse complement the facilities. Additionally, the department has a large ecological study site in rural Gloucester County, a marine station on the Eastern Shore and a forestry research area in New Kent which support staff and student research. Nearby Lake Maury is used for aquatic research.

Courses of Instruction

BIOL 510 Biometry (3-3-0)
Prerequisites: Introduction to Statistics or equivalent course
The application of statistical methods to biological problems. Experimental design, data acquisition, single and multiple analysis of variance, regression and correlation will be covered. Test selection and modeling will also be included.

BIOL 510L Biometry Laboratory (2-0-3)
Corerequisite: BIOL 510
Develops skills in the use of statistical software packages including relational databases.

BIOL 530. Biogeography (4-3-4)
The study of the patterns of distributions of organisms, both past and present and the abiotic and biotic factors that produced those distributions.

BIOL 534. Marine Ecology (4-3-4)
Prerequisites: BIOL 407-General Ecology, and consent of instructor.
Ecology of the disturbed and non-disturbed marine environment. Extensive field and boat work.

BIOL 538. Limnology and Aquatic Biology (4-3-4)
Prerequisites: BIOL 407-General Ecology, and one year of Chemistry.
Interactions of physical, chemical and biological properties in natural and degraded freshwater ecosystems. Emphasis on application of field data gathering, processing and functional classification of organisms in aquatic communities. Extensive field work.

BIOL 582. Life (4-3-3)
BIOL 582L. Life Laboratory
Corequisite: BIOL 582L
Course completes sequence with PHYS 581. Investigation of the geological development of the Earth and the biological and chemical evolution of life on Earth. Course also complements the biology and chemistry learned in studying the origin of life. An exploration of the biology and chemistry used in describing the evolution of life. Experiences encountered designed to be integrated into the middle school teaching environment. **MAT Course**.

BIOL 583. General Ecology (4-3-4)
BIOL 583L. General Ecology Laboratory
Corequisite: BIOL 583L
Prerequisites: BIOL 407-General Ecology, and consent of instructor.
Study of living organisms and their biological, chemical and physical environment in ecosystems, communities and populations, with consideration given to human influence on each level.

BIOL 584. The Environment (4-3-4)
BIOL 584L. The Environment Laboratory
Corequisite: BIOL 584L
Prerequisite: BIOL 582-Life
Study of the world's physical and biological resources, their interrelationships, the interactive role of man and other organisms and the steps necessary to use resources wisely for present and future generations. Laboratory involves on-site visitations to resource utilization areas and methodology for implementation of hands-on experiments in the middle school classroom. **MAT Course**.

BIOL 585. Marine Biology (4-3-4)
BIOL 585L. Marine Biology Laboratory
Corequisite: BIOL 585L
Prerequisite: BIOL 582-Life
Taxonomic and ecological investigations of the major marine groups, pollution ecology and applied marine science. Laboratory experience to accompany marine biology studies. **MAT Course**.

BIOL 587. Physical Geology (4-3-2)
Study of the earth and its structure, the causes and effects of plate tectonics, the formation and modification of minerals and rocks, weathering and erosion, and geological processes occurring in different environments. Involves field and laboratory work. Lecture and lab are combined throughout the course. Grades are based on the integration of the two. **MAT Course**.

BIOL 588. Historical Geology (4-3-4)
BIOL 588L. Historical Geology Laboratory
Corequisite: BIOL 588L
Prerequisite: BIOL 587-Physical Geology
Survey of hard- and soft-rock geology, land form processes and ocean-land interfaces. Paleontology and evolution of life to be used as the core for the history of the Earth's geological development. Involves field and laboratory work with rocks and fossils. **MAT Course**.

BIOL 589. Oceanography (4-3-4)
BIOL 589L. Oceanography Laboratory
Corequisite: BIOL 589L
Prerequisite: BIOL 582-Life
Physical and chemical properties of the hydrosphere, application of ecological principles to the marine environment and history of oceanography. Laboratory experience to accompany Oceanography. **MAT Course.**

BIOL 595. Advanced Topics in Biology (Credit varies)
Course topics will be selected on the basis of faculty and student interests.

BIOL 599. Independent Study. (1-6 Credits)

BIOL 699. Thesis Research. Credits vary.

CHEM 545. Instrumental Methods in Chemistry (4-2-5)
Prerequisites: General Physics 201-202 and Organic Chemistry 321/321L-322/322L.
Operation of instruments used in analysis of both macroscopic and microscopic samples and the theory behind the analyses. Spectroscopic methods: UV-Vis, IR, AA, NMR; Chromatographic methods: GC, HPLC, GC-MS; Thermal method: TGA; Electrochemical methods.

CHEM 555. Environmental Instrumental Analysis (1-3-3)
Prerequisite: CHEM 445 or 545-Instrumental Methods in Chemistry
Analytical methods for the analysis of environmentally significant substances in both trace and macroscopic abundances using modern instrumental methods. Analyses include both desirable and objectional impurities in air and water, such as oxygen in water samples and heavy metal in water, and trace gases and other atmospheric impurities. Emphases in AA and GC-MS with other instruments used as needed.

CHEM 585. Advanced Instrumental Analysis (1-3-3)
Prerequisite: Chemistry 445 or 545- Instrumental Methods in Chemistry
An independent study project, particularly arranged for those working in an analytical testing laboratory. Student and instructor will select a problem to be solved, either in the laboratory at the University or at the place of employment (or jointly). Emphasis will be on utilizing instruments available to the student in the workplace.

ENVS 505. Technical and Scientific Writing (2-2-0)
This course discusses the fundamentals of technical writing with consideration of other types of scientific writing. The stylistic and mechanical problems characteristic of technical writing will be considered and worked on individually and in groups. Students will write and edit journal articles, proposals, and short technical reports.

ENVS 520. Conservation and Mitigation Methods Seminar (2-2-0)
Prerequisites: BIOL 407-General Ecology
A combination lecture and seminar course in which general conservation issues and mitigation methods are evaluated. Course content will vary depending on the interests of the students. Topics will include basic conservation issues such as fragmented populations, metapopulations, the factors that make species vulnerable to extinction, and the relationships of various human societies to the environment. Current conservation strategies including corridors, reserves, captive breeding programs, reintroductions, and economic incentives will be discussed. Mitigation procedures such as wetlands construction and "set asides" will be evaluated. The nature of existing and proposed legal protection offered by state, federal, and international laws and agreements will also be covered. Specific conservation and mitigation projects will be investigated and evaluated.

ENVS 522. Summer Field Studies (1-0-0)
Prerequisites: BIOL 505-Technical and Scientific Writing, BIOL 510/510L-Biometry, ENVS 520-Conservation and Mitigation Methods Seminar
A four week field camp in four habitats emphasizing application of field data gathering and processing techniques to the solving of multifaceted environmental problems. Travel, camping and boatwork required.

ENVS 532. Wetlands Ecology (4-3-4)
Prerequisites: BIOL 407-General Ecology, and one year of Chemistry
A study of the structure and function of wetland systems from salt to fresh and tropical to the arctic. Concepts will cover hydrology, biogeochemistry, wetland development and succession. Wetland delineation, management, creation and restoration will apply these concepts. Field exercises to local wetlands will be included.

ENVS 536. Terrestrial Ecology (4-3-4)
Prerequisites: BIOL 407-General Ecology
A study of the structure and function of terrestrial systems focusing on the distinctive landscapes of the mid-Atlantic coastal region. Concepts will cover population, community and ecosystem ecology of plants and animals within these systems with attention given to the processes and functions that are distinct within and common among these systems. Field exercises will be included.

ENVS 540. Environmental Microbiology (4-3-4)
Prerequisites: General microbiology, BIOL 407-General Ecology, two semesters of organic chemistry, plus BIOL 550 -Technical Writing and BIOL 555 -Biometry
The course will be an investigation of the role microorganisms play in terrestrial, aquatic, and marine ecosystems. The course will explore: the dynamics of microbial populations and communities; normal microbiota and their interactions with other organisms; and environmental pathologies in which microorganisms are the primary agent (e.g., coliforms and other fecal contaminants in water, and adicophiles in mine tailings). In the laboratory, students will learn classic environmental testing procedures and novel new assessment procedures that have their roots in biochemistry and molecular biology.

ENVS 588. Environmental Geology (4-3-4)
Prerequisite: BIOL 587-Physical Geology
Investigation of the environmental impact of geological processes and the geological aspects of environmental degradation. Includes geological hazards such as flooding, landslides, earthquakes, volcanoes, coastal hazards, and concepts of hydrogeology, waste disposal, energy availability, and land use that are important in environmental assessment. Field work.

ENVS 589. Soil Science (4-3-4)
Prerequisite: One year of organic chemistry, BIOL 587-Physical Geology
The scientific investigation of the physical, chemical, and biotic aspects of soils. Important chemical and physical properties and their functioning will be considered, as will soil taxonomy. The impact of human activities on all aspects of the soil resource will be discussed.

ENVS 590. Topical Seminars in Environmental Science (1-4 credits)
Prerequisites: These vary depending on the topic offered
A variety of environmental science related topics not available in the regular curriculum will be offered. These courses will be designed to fill a particular need not met by our regular courses or may be designed to use the talents of an environmental scientist who is not part of our regular faculty.

ENVS 599. Independent Study. (1-6 Credits)

ENVS 699. Thesis Research. Credit varies.

Department of Education and Leisure Studies

(College of Social Science and Professional Studies)
Smith Hall, Room 154
(804) 594-7388

Chairman: Dr. Jane M. Bailey

Faculty

PROFESSORS: Robert H. Cummings, Ph.D.; Lora R. Friedman, Ed.D.
ASSOCIATE PROFESSORS: Sandra L. Bryan, Ed.D.; Linda T. Morgan, Ed.D.; Mary Lu Royall, Ed.D.; Aline Stomfay-Stitz, Ed.D.; Peter J. Verhoven, Re.D.
ASSISTANT PROFESSORS: Jane M. Bailey, Ed.D.; Stuart P. Cottrell, Ph.D.; Christina C. Ramirez-Smith, Ed.D.; Marsha M. Sprague Ed.D.

Emeritus Faculty

ASSOCIATE PROFESSORS: James N. Hubbard III, M.Ed.; John E. Jenkins, M.Ed.

About the Department

The Department of Education and Leisure Studies provides courses appropriate for the MAT degree; for baccalaureate licensure in early childhood, middle school and selected secondary school education; and for the Bachelor of Science degree in Leisure Studies. The faculty has extensive and comprehensive K-12 teaching and administrative experience and continues to be involved actively in many facets of public instruction. Students in the final stage of the licensure process have the opportunity for an internship teaching semester in the public schools. As part of the University's International Education Program, students may also select an internship in one of the American Overseas Schools in Latin America. Education courses often incorporate practicum components in the public schools to observe, instruct or assist the teacher.

The Education faculty uses the facilities of the University and of various public schools, as provided in cooperative arrangements. Students use the Co-operative Learning Laboratory in Smith Hall for group work and computer assignments. The Learning Resource section of the Captain John Smith Library houses the education collection, curriculum guides, sample textbooks, instructional aids, and children's literature books. With the assistance of the faculty and staff of the library media center, hands-on instruction utilizing educational technology is provided. The University's IBM-PC and Apple computer laboratories are also available with flexible hours. Students in teacher education courses may also use the Newport News Teacher Resource Center to supplement the University's collection of professional journals and curricular materials.

Courses of Instruction

EDUC 501. Multicultural Education (3-3-0)
Study of the multicultural character of the American society, intercultural relations and implications for educational programming and practice.

EDUC 502. Teachers as Researchers (3-3-0)
Teachers as consumers and producers of research. Focuses on concepts, methodologies and procedures of educational research including problem identification, basic data analysis and application to educational problems.

EDUC 507. Foundations (1-1-0)
Study of the American educational system and its relation to history and society. The role of teacher will be reviewed in relationship to philosophical viewpoints and school organization. Limited to graduate students and recertifying teachers.

EDUC 510. Teaching Internship (6-0-12)
A full-time clinical teaching experience in the public schools.

EDUC 516. Middle School Curriculum and Instruction (3-3-0)
Course examines the middle school concept, including its basic components, characteristics of the learner, appropriate instructional strategies and curriculum design.

EDUC 518. Secondary School Curriculum and Instruction (3-3-0)
This course is designed to examine curriculum and instruction at the secondary school level. Emphasis will be placed on curriculum development, the teaching-learning process, methods of teaching, and traditional innovative instructional practices designed for secondary school teaching. Current research in secondary education will be reviewed.

EDUC 521. Early Literacy (3-3-0)
This course will examine both the theoretical framework of literacy development and its practical applications for the development of oral and written language. Emphasis will be placed on the curricular and instructional implications for extending early literacy behaviors.

EDUC 522. Integrated Curriculum (3-3-0)
The course allows teachers to explore the rationale for integrating the curriculum and models of curriculum integration, and provides practice in creating integrated instructional units.

EDUC 523. Teaching Reading and Writing (2-2-0)
Prerequisite: Graduate standing within MAT Program or a currently certified teacher.
Skills and strategies for teaching reading and writing. Receptive and expressive competencies to be emphasized.

EDUC 531. Strategies and Models for Teaching Gifted Learners (3-3-0)
This course will enable teachers to identify specific models of instruction and practice strategies appropriate for gifted learners.

EDUC 535. The Exceptional Learner (2-2-0)
Strategies for teaching all types of exceptionality: gifted, learning disabled, visually impaired, hearing impaired, physically handicapped, emotionally disordered and mentally retarded; and strategies for the development, implementation and evaluation of individual education programs.

EDUC 536. Characteristics of the Learning Disabled Student (3-3-0)
This course introduces the characteristics and complexities of the learning disabled student. Educational and psychological implications of the diagnostics/prescriptive approach to the learning disabled student will be studied.

EDUC 543. Classroom Management and Discipline (2-2-0)
Classroom organization and management for optimal student learning; practical approaches for preventing and coping with behavior problems.

EDUC 544. Evaluation of Learning (2-2-0)
Construction and selection of measurement and evaluation instruments, interpretation and use of test results and communication of data with parents.

EDUC 550. Developmental Reading (3-3-0)
Course is designed to help teachers understand the psychology of the reading process, strategies for helping learners in the elementary school, current practices, and interrelationships with other subjects and activities in the curriculum. The application of theory and research to classroom practice is emphasized.

EDUC 552. Diagnostic Reading (3-3-0)
Course is designed to help classroom teachers diagnose students' strengths and weaknesses, provide for the growth of developmental learners, and correct the various kinds of problems which are grouped under the heading of reading disabilities.

EDUC 595. Advanced Topics in Education (Credit varies)
Course topics will be selected on the basis of faculty and student interests.

EDUC 599. Independent Study. (1-6 Credits)

EDUC 649. Advanced Instructional Strategies (3-3-0)
The course allows teachers to study and research differing instructional strategies, to try them out in classroom settings, and to compare their different effects.

EDUC 695. Capstone Seminar for Mathematics and Science Concentrations (1-1-0)
Capstone course for advanced graduate students in the mathematics and science concentrations to study the impact of the changing world in education.

EDUC 696. Capstone Seminar for Language Arts Concentration (3-3-0)
This course is the culminating course for students in the language arts concentration. Designed for students in the last semester of degree completion as an opportunity to complete a Master Portfolio Project developed throughout the MAT Program. The students will meet weekly to discuss research and innovations in language arts instruction, to share individually designed portfolios and to connect MAT Language Arts Program Objectives to critical issues in language arts education.

EDUC 699. Thesis Research. Credits vary.

Department of English

(College of Arts and Humanities)
Crestar Bank Building-4th Floor
(804) 594-7024

Chairman: Dr. Jay S. Paul

Faculty

PROFESSORS: Douglas K. Gordon, Ph.D.; Albert E. Millar, Jr., Ph.D.; Jay. S. Paul, Ph.D.
ASSOCIATE PROFESSORS: A. Burnam MacLeod, Ph.D.; Roberta K. Rosenberg, Ph.D.; L. Barron Wood, Jr., M.A.
ASSISTANT PROFESSORS: Maureen Morrissey Archer, Ph.D.; Nancy R. Barendse, Ph.D.; Kara K. Keeling, Ph.D; Terrence O. Lee, Ph.D.; Roark Mulligan, Ph.D.; Scott T. Pollard, Ph.D.
INSTRUCTORS: James A. Cornette, Jr., M.A.; Judith P. Spain, M.A.

Emeritus Faculty

PROFESSORS: A. Jane Chambers, Ph.D.; Joyce K. Sancetta, Ph.D.; W. Stephen Sanderlin, Jr., Ph.D.

About the Department

The English Department has long been involved with as great a variety of educational efforts as any on the Christopher Newport University campus.

While members of the department sustain diverse specialties such as children's literature, feminist criticism, Latin American literature, composition pedagogy, rhetorical analysis, and writing fiction and poetry, they all regularly teach writing courses as well as various literary periods. The English Department faculty are dedicated to fine teaching and have supplemented traditional lecturing with seminar formats, discussion-oriented instruction, and workshops featuring peer instruction. Above all, the department prides itself on working closely with students on all levels.

In 1993, the department opened the Alice F. Randall Writing Center, staffed by trained undergraduate tutors to assist CNU students regardless of major.

In addition to campus efforts, members of the department regularly visit area schools to supervise teaching interns, to lecture on subjects like Renaissance Literature, and to conduct creative writing workshops. For over a decade, the department has co-sponsored an annual Theater Festival for Tidewater High School students and teachers. CNU Theatre productions of plays like *The Glass Menagerie*, *Oedipus the King*, *All My Sons*, and *Tartuffe* have been enjoyed by approximately 15,000 students since 1982, and English professors have regularly lectured on and conducted workshops about the plays.

The department has designed its graduate courses in response to teacher-interest surveys as well as to represent the components of language arts instruction. The courses in literature focus on areas of contemporary and regional importance, and they incorporate selections of interest to young adult readers. The courses in writing are meant to clarify and expand the teacher's competence. The courses in language and critical thinking reflect some of the most urgent teaching needs in Tidewater schools.

Courses of Instruction

ENGL 510 Readings in Southern American Literature (3-2-2)
This course will analyze the literature of the American South from perspectives such as family, history and storytelling. The course includes a discussion of canonical literature as well as young adult literature. Students will analyze literature and discuss strategies for teaching the literature of the American South.

ENGL 511 Reading Global Literature (3-3-0)
A study focusing on literary works (including works for young readers) from Latin America, Africa, the Middle East, the Indian subcontinent, and Asia, as well as selected background sources on relevant continents, nations, time periods, and cultures. The course provides the skills necessary to see the world from a non-Western perspective and the capacity to teach others to comprehend that perspective.

ENGL 512 Reading Multicultural Literature (3-3-0)
This course offers students an opportunity to read and discuss important works written by female and male authors of diverse racial, religious, regional, and ethnic backgrounds in the United States. Students will analyze literature and discuss strategies for teaching this literature.

ENGL 514 Advanced Children's Literature (3-2-2)
This course examines the history of children's literature and changes in the concept of childhood. Issues to be discussed include censorship and canon formation, especially in relation to contemporary works for children.

ENGL 520 The Reading and Writing of Poetry for Teachers (3-2-2)
A course acquainting teachers with the nature of poetry--diction, techniques, forms, and the creative process--and demonstrating means of integrating the reading, oral interpretation, and writing of poetry into the language arts curriculum in order to (1) encourage personal expression, (2) increase awareness of literary art, (3) improve analytical thought, and (4) sustain vocabulary development.

ENGL 521 Teaching Composition in Language Arts Classes (3-2-2)
This course is an introduction to the theory and practice of teaching composition by the writing process.

ENGL 522 Teaching Writing in Content Areas (3-3-0)
A workshop course designed to provide means of utilizing information and analytical writing for various classroom activities, including discussion, composition, and examinations, as well as instruction in the evaluation of writing.

ENGL 530 Advanced Grammar and Linguistics (3-3-0)
Intensive study of theories and practices relevant to instruction. Emphasis on language history, theoretical and applied linguistics as they influence language acquisition, dialects, grammar, standard and nonstandard usage.

ENGL 531 Teaching English as a Second Language (3-3-0)
The course covers theories of how learners (both children and adults) acquire a second language, theories about how their first language interferes with learning the second, and the various practices for teaching, speaking and writing at various levels of education.

ENGL 595. Advanced Topics in English (Credit varies)
Course topics will be selected on the basis of faculty and student interests.

ENGL 599. Independent Study. (1-6 Credits)

ENGL 699. Thesis Research. Credits vary.

Department of Mathematics

(College of Science and Technology)
Gosnold Hall, Room 201
(804) 594-7194

Chairman: Dr. Martin W. Bartelt

Faculty

PROFESSORS: John J. Avioli, Ph.D.; Martin W. Bartelt, Ph.D.; Stavroula E. Kostaki-Gailey, Ed.D.; Richard M. Summerville, Ph.D.; Glen M. Weber, Ph.D.
ASSOCIATE PROFESSORS: Parviz Khajeh-Khalili, Ph.D.
ASSISTANT PROFESSORS: Anna Bampton, Ph.D.; Bobbye Bartels, Ph.D.; Brian Bradie, Ph.D.; Hongwei Chen, Ph.D.; James E. Martin, Ph.D.; Ronald L. Persky, M.A.
INSTRUCTOR: Detta K. Rich, M.S.

Emeritus Faculty

ASSOCIATE PROFESSOR: Daisy D. Bright, M.A.

About the Department

The Department of Mathematics offers a variety of courses for those who wish to develop general or specific skills in mathematics, to satisfy the undergraduate mathematics distribution requirement, to study mathematics for aesthetic reasons, or to pursue the Bachelor of Arts or Bachelor of Science degrees in mathematics or the minor in mathematics. The department offers courses for those who seek the Master of Arts in Teaching degree for elementary school, middle school or secondary school concentrations. It also offers courses in the Master of Science in Applied Physics degree program.

The department is involved in mathematics education related activities such as supervising student teachers, alliances with public schools, grants and mathematics research.

Since education is a lifelong activity, it is imperative that teachers of mathematics continue to be students of mathematics. The mathematics specialty of the MAT program provides professional development activities that blend mathematics content, instructional pedagogy and instructional resources. The courses are based on recommendations of the Mathematical Association of America (MAA) and the National Council of Teachers of Mathematics (NCTM).

Courses of Instruction

MATH 570. Advanced Instructional Strategies in Mathematics (3-3-0)
Prerequisite: MATH 308 or MATH 309 or MATH 338
An update of the methodological background necessary for teaching school mathematics, based upon current understanding and insights derived from both content and pedagogy. Development of creative instructional approaches that are meaningful and mathematically correct and instill in students enthusiasm and satisfaction in learning and using mathematics. Opportunities to implement methodological practices in the classroom and to consider their impact on the performance of both students and teachers. Includes internship in classroom environment.

MATH 572. Current Issues in School Mathematics (3-3-0)
In-depth exploration of current issues in mathematics education. Topics may include: the "problem solving" centered mathematics curriculum; participation and retention of females and minorities in mathematics; mathematics anxiety; using technology in teaching mathematics; the NCTM Curriculum and Evaluation Standards for School Mathematics.

MATH 573. History of Mathematics (3-3-0)
A study of the origins, philosophy and development of mathematics from classical antiquity through the twentieth century. Focuses on critical periods in the evolution of areas such as geometry, number theory, algebra and calculus. Involves problem solving as well as reading.

MATH 574. Discrete Mathematics (3-3-0)
A course designed to expose students to the discrete aspects of mathematics. Course emphasizes: developing basic techniques and modes of reasoning in combinatorial problem solving; describing and analyzing the algebraic structure of certain sets, relation systems; and illustrating and analyzing the wide variety of applications of discrete mathematics. Topics include logic, sets, algorithms, mathematical induction, combinatorics, number theory, graph theory and Boolean algebra.

MATH 575. Computer Software & Calculators in School Mathematics (3-3-0)
A course designed to explore the use of computers and graphing calculators as tools in the teaching/learning of mathematics. An integral part of the course is the hands-on use of selected software for introducing, developing and reinforcing mathematical concepts.

MATH 576. Mathematical Connections (3-3-0)
The study of various topics from algebra, functions, number theory, geometry, probability,and statistics. The course emphasizes the connections and interplay among these topics and their applications so that the student can use and value the connections among mathematical topics and use and value the connections between mathematics and other disciplines.

MATH 578. Elementary Geometry from an Advanced Viewpoint (3-3-0)
Prerequisite: MATH 205
Compares and contrasts the origins, applications and basic structures of Euclidean and non-Euclidean geometry. Attention given to ideas involved in teaching geometry.

MATH 579. Modern Analysis (3-3-0)
Prerequisite: MATH 360
A study of the theoretical development of the calculus concepts. Topics include structure and properties of real number systems, functions, sequences and series, antiderivatives, and Lebesque integral.

MATH 580. Advanced Numerical Analysis (3-3-0)
Prerequisites: MATH 250, 260 and 320 or permission of the instructor.
The course covers a range of topics in numerical analysis concentrating on an introduction to finite elements and their applications. Use of a software package and research journal readings are required.

MATH 581. A Second Course in Abstract Algebra (3-3-0)
Prerequisite: MATH 370
This course covers topics in abstract algebra which are not covered in a first course. Topics include Sylow's Theorem, Module Theory, Galois Theory and their applications.

MATH 582. Introduction to Topology (3-3-0)
Prerequisite: MATH 360
An introductory course in topology. Topics include sets and functions, topology spaces, metrics spaces, connectedness, compactness, countability and separation.

MATH 583. Mathematics in the Content Areas (3-3-0)
Prerequisite: MATH 308
This course will assist teachers in developing creative instructional approaches which integrate mathematics with other content areas (science, social studies, language arts, fine arts, physical education) and which instill in students enthusiasm and satisfaction in learning and using mathematics. The course will provide opportunities to implement these methodological practices in the classroom.

MATH 584. Mathematics Cognition (3-3-0)
This course examines mathematics learning theories developed during the 20th-century with an emphasis on recent research on learning mathematics. The learning theories are related to each other, to mathematics teaching and instruction, and to curricular decision making. Students are expected to implement instructional or curricular changes in their classroom in a unit and then evaluate the implementation.

MATH 595. Advanced Topics in Mathematics (Credit varies)
Course topics will be selected on the basis of faculty and student interests.

MATH 599. Independent Study. (1-6 Credits)

MATH 699. Thesis Research. Credits vary.

Department of Nursing

(College of Social Science and Professional Studies)
Smith Hall, Suite 128
(804) 594-7252

Chairman: Dr. Arlene A. Stepnick

Faculty

ASSOCIATE PROFESSORS: Arlene A. Stepnick, Ph.D.
ASSISTANT PROFESSORS: Barbara S. Harrison, Ed.D.; Yvonne N. Stringfield, Ed.D.

About the Department

The differential roles within nursing are each separate and distinct. The nurse educated at the baccalaureate level is recognized as a generalist, while the nurse educated at the graduate level is recognized as a specialist. Christopher Newport University has offered an undergraduate program in nursing since 1985. This program, accredited in 1991 by the National League for Nursing, has two tracks. Track one is for students who wish to earn a BSN and to take the registered nurse licensure examination, the National Council Licensure Examination (NCLEX). Track two is a program for registered nurses who have a diploma or an associate degree in nursing and who wish to earn a baccalaureate degree in nursing. There are approximately 300 undergraduate students enrolled in pre-nursing and nursing courses.

Beginning with the Fall 1995 semester, the University will offer graduate education to nurses. The first program to be offered will prepare nurses to practice in the specialist role of nurse case manager. The American Association of Colleges of Nursing, the American Nurses' Association and the National League for Nursing recognize the role of nurse case manager as a specialization within nursing. While the number of colleges and universities nationwide offering programs to prepare nurse case managers is growing, no college or university in Virginia offers this type of graduate nursing program.

Courses of Instruction

NURS 510. Nursing Theory (3-3-0)
Major theories and conceptual frameworks of nursing that serve as the basis for professional nursing will be examined. The study will begin with a review of epistemological issues and barriers to theory development. Students will expand their expertise in using theory as a basis for their professional practice and develop beginning skills of critique using several models of theory evaluation. Emphasis will be given to Nursing's Human Needs Theory.

NURS 520. Nursing Research Methods (3-3-0)
The focus of this course is the principles and methods of nursing research and the interconnectedness of research, theory and practice. Students will read extensively to identify research questions, significant to nursing practice and will develop initial drafts of a research proposal aimed at answering selected research questions.

Curriculum for the second year of study, NURS 530, 540, 550, 560, 699, will be described in the 1996-1997 edition of the graduate catalog.

Department of Philosophy and Religious Studies

(College of Arts and Humanities)
Tidemark Bank Building-4th Floor
(804) 594-7020

Chairman: Dr. George A. Teschner

Faculty

PROFESSORS: John Hoaglund, Ph.D.; Jouett L. Powell, Ph.D.; George A. Teschner, Ph.D.
ASSOCIATE PROFESSOR: Richard A. Beauchamp, Ph.D.
ASSISTANT PROFESSORS: Deborah C. Mullen, Ph.D.; Kenneth T. Rose, Ph.D.
INSTRUCTOR: Kip Redick, M.A.

About the Department

The Department of Philosophy and Religious Studies offers a Bachelor of Arts in philosophy, a minor in philosophy, and a concentration in religious studies. The philosophy program at the University emphasizes the development of critical thinking skills through courses in informal and formal logic, and theory of knowledge. It encourages a global understanding of diverse philosophical traditions through courses in Western, Middle-Eastern, and Asian philosophy. It offers a large number of courses of general interest to non-majors in a variety of areas such as medical and environmental ethics, feminist thought, philosophy of mind and machine, philosophy of humor, philosophy of technology, etc. The religious studies program aims at a balanced ecumenical presentation of the religions of the world with a sympathetic insight into the motivations and beliefs of each. The department is committed to serving the needs of the students with the latest technological tools and maintains a computerized critical thinking lab, a department computerized bulletin board, and a variety of programs for studying philosophy outside the classroom.

Students who minor in philosophy are enriched in their understanding of their major field of study by gaining broader insight into it intellectual history and theoretical presuppositions. The offerings of the department fully prepare students for graduate work in philosophy as well as for the continuation of their education in other academic disciplines. The department contributes scholarly activity and instruction related to the MAT in Language Arts program. Students who take only a few courses in philosophy are benefitted by an enhancement of their persuasive, expressive, and analytic skills which are uniquely cultivated by the study of philosophy.

Courses of Instruction

PHIL 521 Critical Thinking and Study Skills (3-2-2)
A concept of critical thinking is developed with special but not exclusive reference to grades 6-8 and the language arts. The role of thinking skills, dispositions, and inquiry are treated and integrated in a humanistic, Socratic conception of critical thinking. The relations of critical thinking to formal logic, to creative thinking, and to the emotions are examined. Techniques for students to master, then teach critical thinking are explored. Among the techniques are text analysis with an elementary logic of statement relations, appraising arguments, and employing argumentative writing as intellectual inquiry. Assessment of critical thinking--both skills and dispositions--is treated.

PHIL 595. Advanced Topics in Philosophy and Religious Studies (Credit varies)
Course topics will be selected on the basis of faculty and student interests.

Department of Physics and Computer Science

(College of Science and Technology)
Gosnold Hall, Room 134
(804) 594-7065

Chairman: Dr. Randall H. Caton

Faculty

PROFESSORS: John J. Avioli, Ph.D.; A. Martin Buoncristiani, Ph.D.; Randall H. Caton, Ph.D.; George R. Webb, Ph.D.
ASSOCIATE PROFESSORS: Joshua C. Anyiwo, Ph.D.; Hitohisa Asai, Ph.D.; David C. Doughty, Jr., Ph.D.; David E. Game, Ph.D.; Frederick F. Hartline, Ph.D.; David P. Heddle, Ph.D.; David L. Hibler, Ph.D.; Robert F. Hodson, Ph.D.; James I. Moore, Ph.D.; Raouf L. Selim, Ph.D.; Antonio C. Siochi, Ph.D. ; Jane C. Webb, Ph.D.
ASSISTANT PROFESSORS: Latifa Elouadrhiri, Ph.D.; Peter A. Knipp, Ph.D.; Seungug Koh, Ph.D.; Lynn Lambert, Ph.D.; Zhujun Liz Li, Ph.D.
VISITING FACULTY: Joseph Hafele, Ph.D.; Richard Peterson
SENIOR RESEARCHERS: Nikita Pougatchev, Ph.D.; Shouben Zhou

About the Department

The Department of Physics and Computer Science offers courses in two degree programs: a Master of Science in Applied Physics and a Master of Arts in Teaching.

The Master of Science in Applied Physics addresses the needs for graduate education in applied physics and computer science for both part-time and full time graduate students who desire excellence in instruction, state of the art equipment and software, and a faculty with an intense involvement in the application of physics and computers to solve exciting and significant problems. Our 25-person department has amassed a strong record of research and publications in six areas: solid state (lasers, semiconductors and superconductors), nuclear physics, dynamical systems, artificial intelligence, instrumentation and advanced computer systems, and new computer-based technologies for primary and secondary education.

Much of this research has resulted in significant scientific collaborations with the two national laboratories here, NASA-Langley Research Center and the Continuous Electron Beam Accelerator Facility (CEBAF). Furthermore, individual faculty have cooperative research projects with scientists from the Naval Research Lab, Boston College, University of Cincinnati, Vanderbilt University, University of Georgia, University of Massachusetts, Old Dominion University, Rensselear Polytechnic Institute, Stanford University, and Wuerzburg University. Our international connections include relationships with professors and researchers in Russia, Germany, France, Italy, and the People's Republic of China.

The department's contribution to the science specialty for the Master of Arts in Teaching (MAT) degree is made by departmental faculty members with experience in science education. The MIRACLES program received recognition for promoting interest in science and mathematics among minority students in the middle schools. This program has been continued by project EXCEL funded by the National Science Foundation. The SCHOOL SCIENCE COMES ALIVE program is designed to create an exciting, science-

enrichment experience for third, fourth, and fifth graders in four elementary schools on Virginia's Peninsula. Special projects involving innovative applications of technology to teaching at all levels have been and are being developed. For example, the interactive computer classroom system CLASSTALK is currently being tested at CNU. The department is heavily involved in Virginia's NSF State-wide Systemic Initiative, V-QUEST. Our V-QUEST STARS program has five reform areas, which together form a systemic approach to improving education in science at all levels.

The department also offers graduate courses in physics and computer science to non-degree seeking students.

Equipment and Laboratories in the Department

The department has five major teaching-research labs: the Hunter Creech Computer Lab, the Superconductivity and Data Acquisition Lab, the Photonics and Laser Lab, the Digital Systems Lab, and the Information Science Lab. In addition, it has two general purpose laboratories and a large commons area for student-faculty collaborations and study. Furthermore, the department makes extensive use of two computer classrooms in its space in Gosnold Hall. The James I. Moore Computer Classroom features a NOVELL network of thirty computers, and Gosnold's large lecture room has an interactive computer system with 64 keypad stations, a host computer and a projection video system.

Major computer equipment in these departmental labs includes eighteen Sun IPC color workstations, five SPARC II workstations, two SPARC LX workstations, approximately 22 gigabytes of file server with one SPARC 10 server running at 120 MIPS, two HP workstations, two HP 300 computers and data acquisition subsystems. The department has, in addition, two schematic capture workstations, 22 PC compatibles, six Quadra 660AV Macintosh computers, two Power Macs, one Mac Quadra 950, two Tektronix logic analyzers, two digital storage scopes, an Altera foundry for erasable programmable logic devices, and one DSP system. Our MasPar parallel-processing computer is a massively parallel machine with 2000 processors and a Dec 5000/240 Ultrix as a front end.

The superconductivity lab features two displex closed cycle refrigerators, a 25 ton Carver press, a computer controlled Marshall furnace (2350°F), and five other processing ovens, all in a highly instrumented and computer-controlled environment. This equipment is complemented by an X-ray diffraction machine.

Major software includes the mathematical computation tools MACSYMA, MATHEMATICA, and MATHCAD; VEE Test LABVIEW; Genii-Plus and Optical Design; printed circuit design with schematic capture and circuit simulation systems by CADENCE; system simulation and analysis software SLAM and EXCELERATOR; publishing and color drawing packages FRAMEMAKER, ARTISAN, Hyper Studio and ISLAND GRAPHICS; ANSYS for finite element computer analysis; and languages such as ADA, FORTRAN; PASCAL; C; C++.

The office network and the Sun network are connected by VERNET to INTERNET. Communication can be made with the department by email: msphysics@pcs.cnu.edu.

Research Projects

The Department of Physics and Computer Science has at present projects sponsored by the Naval Research Lab (NRL), the National Aeronautics and Space Administration (NASA), the National Science Foundation, the Continuous Electron Beam Accelerator Facility (CEBAF), the Center for Innovative Technology, and the State Council of Higher Education. Faculty are involved with local companies in research and development efforts as well.

Memorandum of Understanding

Christopher Newport University has a Memorandum of Understanding with Longwood College for a dual degree program leading to a B.S. in Physics from Longwood College and an M.S. in Applied Physics from CNU. Contact the Program Coordinator at Longwood College or CNU for further information.

Courses of Instruction – Physics

PHYS 501. Models of Dynamical Systems (3-3-0)
Prerequisites: Math through differential equations and graduate standing in the department or permission of the instructor.
Continuum and discrete models for physical systems. The classical models of physical phenomena such as elasticity, electromagnetism and fluids, the modern perspective on their analytic and qualitative solutions, and the insights that numerical analysis of the models gives to expected behaviors of dynamical systems. Computer analysis and graphical representation of solutions for regular and chaotic dynamical systems.

PHYS 502. Quantum Physics (3-3-0)
Prerequisites: PHYS 501 and graduate standing within the department or permission of instructor.
Study of the formulation of quantum physics and the use of computers to analyze quantum mechanical systems. Topics include the postulates of quantum physics, the Shroedinger equation, indeterminacy, the Heisenberg representation, angular momentum, internal degrees of freedom, the hydrogen atom, perturbation theory, quantization of the EM field and radiative transitions.

PHYS 503. Data Acquisition and Instrumentation (3-3-0)
Prerequisites: Graduate standing within the department or permission of instructor.
Data reduction and error analysis. Computer-controlled data acquisition systems in the laboratory. The use of a case study to develop a measurement system. Noise in electronic systems. Introduction to signal processing. Students are required to complete a project that includes an implementation of a measurement system and data reduction of the results.

PHYS 504. Electromagnetic Theory (3-3-0)
Prerequisites: PHYS 304 or MATH 350; graduate standing within the department or permission of instructor.
Review of electrostatics and magnetostatics. Maxwell's equations and time varying fields: wave propagation and polarization, waveguides and cavities, and radiating systems. Computer programs for the solution of problems will be emphasized.

PHYS 506. Thermodynamics and Statistical Physics (3-3-0)
Prerequisites: Graduate standing within the department or permission of instructor.
Review of thermodynamics followed by advanced topics in thermodynamics: first-order phase transitions, critical phenomena, the Nernst postulate, and irreversible thermodynamics. Statistical mechanics: entropy representation, microcanonical, canonical, grand canonical formalisms, quantum fluids, and fluctuations. Use of the computer in the analysis and presentation of technical problems.

PHYS 521. Computer Architecture (3-3-0)
Prerequisites: Graduate standing within the department or permission of instructor.
Advanced issues and techniques in computer architecture and design. Instruction set design and performance impact. Architectural simulation using VERILOG. Pipelining. Computer arithmetic and vector processors. Advanced memory and cache design. I/O interfaces for high performance. Survey of parallel architectures.

PHYS 522. Microprocessor-based Systems (3-3-0)
Prerequisites: Graduate standing in the department or permission of the instructor.
Focus on microprocessor-based computer architectures. Hardware topics include studies of several microprocessor architectures, memory, peripheral interfaces, and buses. Software issues include I/O and interrupt handling, and microprocessor development systems.

PHYS 523. Computer Architecture, Advanced Topics (1-1-0)
Prerequisites: ENGR 414 or equivalent.
A one-credit course in advanced computer architecture for students with a solid undergraduate background in the topic. Students may not take both PHYS 521 and 523.

PHYS 524. Microprocessor-based Systems, Advanced Topics (1-1-0)
Prerequisites: PHYS 422 or equivalent.
A one-credit course in advanced microprocessor-based systems for students with a solid undergraduate background in the topic. Students may not take both PHYS 522 and 524.

PHYS 531. Optical Physics (3-3-0)
Prerequisites: Graduate standing in the department or permission of the instructor.
This course lays the foundation of modern optical science. It presents an overview of the properties of light and its interaction with matter, and describes basic principles for control and detection of light beams. Provides an introduction to optical spectroscopy. The use of computer software for optical analysis is emphasized.

PHYS 581. The Universe (3-3-0)
Prerequisites: Graduate standing (MAT) or permission of the instructor.
The origin of the universe, galaxies, stars, solar system and the earth. Part of an interdisciplinary sequence with BIOL 582. Course addresses the Commonwealth of Virginia Standards of Learning objectives for physical science. **MAT Course.**

PHYS 581L. The Universe Laboratory (1-0-3)
Hands-on material that complements PHYS 581 and gives middle school teachers experiences that can be integrated into their own teaching environment. The use of simple apparatus and experiments as well as computer simulations are explored. **MAT Course.**

PHYS 582. Energy and the Environment (3-3-0)
Prerequisites: PHYS 581 or permission of the instructor.
Environmental issues important to the middle school curriculum are explored using basic physical principles. Typical topics include: fossil fuels and power production, the greenhouse effect and the ozone depletion, automobile emissions, radon gas, nuclear energy and wastes, solar and other alternative energies, and energy conversion. Course addresses the Commonwealth of Virginia Standards of Learning objective to study the physical sciences as they apply to the environment. **MAT Course.**

PHYS 583. High Technology in Contemporary Applications (4-4-0)
Prerequisites: PHYS 581 or permission of the instructor.
This course enables middle school teachers to address current technological issues and understand current technological devices by learning the underlying concepts behind the technology. The focus is on the basic digital and optical concepts that are used in designing modern high technology applications. Simple hands-on experiences are emphasized and laboratory activities on each topic will be part of the

course. Computers, lasers, and many other everyday practical applications such as traffic light controllers and microwave oven controllers are discussed in a qualitative approach. **MAT Course.**

PHYS 584. Development of Scientific Thought (3-3-0)
Prerequisites: PHYS 581 or permission of the instructor.
Designed to give to teachers an understanding of the origin and growth of scientific values and of how people have developed science to predict, control and live in harmony with the natural world. These goals are achieved through the study of selected periods of the history of science in the West. The course also presents the role of history in transmitting relevant historical as well as modern scientific information to middle school students. The teachers will attain the Commonwealth of Virginia Standards of Learning objectives concerning the development of scientific values, the scientific world view, and the use of scientific concepts process skills and values in society. Guest speakers will be used where appropriate.
MAT Course.

PHYS 591. Directed Research and Internship for Educators
Credit varies; maximum credit 6 hours
Research in physics, applied physics or engineering on a topic of interest to a national laboratory and development of educational units for presenting the area of research to school science students. The project chosen is explored in depth; the exploration must draw upon the participant's science and mathematical background. A final written report, oral report, product designed for use in the schools, and demonstration of that product are required. Course is open only to participants in summer programs of CEBAF and NASA Langley Research Center.

PHYS 595. Advanced Topics in Physics (Credit varies)
Course topics will be selected on the basis of faculty and student interests.

PHYS 599. Independent Study. 1-4 Credits.

PHYS 621. Digital Signal Processing (3-3-0)
Prerequisites: PHYS 503, PHYS 522
This course covers the principles of digital signal processing beginning with the sampling process on through digital filter design. Advanced topics include approximation effects, inverse filtering and hardware implementation structures. The course will correlate theoretical aspects presented in the classroom with practical experimentation and design in a laboratory setting using commercial DSP hardware.

PHYS 629. Instrumentation Systems Design (3-3-0)
Prerequisites: PHYS 521, PHYS 522; completion of 12-15 hours of program requirements
This advanced instrumentation systems course is directed at understanding a comprehensive systems problem and formulating a design approach based on sound computer engineering principles. This course is a precursor to the student's thesis work in Instrumentation and Advanced Computer Systems. Students will select computer system research areas and formulate problem solving approaches under instructor supervision. Background research, trade off studies and alternative implementations will be explored. Course will be held in a seminar setting to allow students to provide weekly reports on the progress of their work. It will also serve as a peer/faculty review process to assist the student in designing a project suitable for the thesis.

PHYS 631. Physics of Solids (3-3-0)
Prerequisites: PHYS 502 and PHYS 506 or consent of instructor.
Introduction to the physics of solids at the graduate level. Quantum ideas are emphasized to provide a

better understanding of the properties of solids. Topics include crystal structure, electrons in a periodic potential, Fermi surface and band theory, lattice dynamics, phonons, semiconductors, and magnetism.

PHYS 632. Lasers and Photonics (3-3-0)
Prerequisites: PHYS 631
This course provides a survey of fundamental optical properties of matter and how they are employed in modern optical devices. The course focuses on laser physics and the varied use of lasers in meteorology. Includes a discussion of optical fibers for use in communications and sensors.

PHYS 634. Superconducting Materials and Devices (3-3-0)
Prerequisite: PHYS 631
Introduction to superconductivity. Properties of conventional superconductors. Theory of type-II superconductors and the Josephson effect. Properties of high temperature superconductors including crystallography, electronic structure, synthesis, thermal and transport properties, and magnetic properties. Overview of applications of superconductors. Extensive laboratory experimentation.

PHYS 639. Design of Solid State Systems and Sensors (3-3-0)
Prerequisite: Completion of 12-15 hours of program requirements
A design course to integrate knowledge acquired in the solid state program into a research/design effort. Course will be held in a seminar setting to allow students to provide weekly reports on the progress of their work. It will also serve as a peer/faculty review process to assist the student in designing a project suitable for the thesis.

PHYS 641. Computational Physics (3-3-0)
Prerequisites: PHYS 501, PHYS 502, MATH 580, CPSC 501, C or Fortran 90.
Development of advanced analytical, numerical and analytic-numerical algorithms for computational systems dynamics (CSD) on serial and parallel machines. Projects-oriented computation of dynamical systems models on serial and parallel machines.

PHYS 649. Design of Integrated Computational Environments (3-3-0)
Prerequisite: PHYS 641; completion of 12-15 hours of program requirements
Conceptualize, design, develop and test an integrated computational environment suitable for the analysis of dynamical systems, and the appropriate presentation of results therefrom. Course will be held in a seminar setting to allow students to provide weekly reports on the progress of their work. It will also serve as a peer/faculty review process to assist the student in designing a project suitable for the thesis.

PHYS 689. Advanced Instructional Strategies with Internship (3-3-0)
Prerequisites: PHYS 581L, BIOL 582L
State of the art strategies and technologies for effective science teaching in the middle school are applied and tested in student developed units. Strategies include advanced implementations of active learning methods (such as hands-on explorations, field trips, science projects, and take-home activities); and advanced classroom uses of new technologies such as computers, multimedia (CD/ROM, videotape, and videodisc), E-mail, networks, and electronic bulletin boards. **MAT Course.**

APCS 699. Thesis Research (Credits vary)

Courses of Instruction – Computer Science

CPSC 501. Software System Design and Implementation (3-3-0)
Prerequisites: Graduate standing or permission of the instructor.
The management, specification, design, implementation and documentation of complex software systems. A major project is to be done in the last half of the course. A paper or class presentation based on independent reading of research papers concerning new developments in software engineering will be required. Students will be expected to learn to use software systems such as CASE tools.

CPSC 502. Communications I (3-3-0)
Prerequisites: Graduate standing and ability to program in C, or permission of the instructor.
A comprehensive view of data communications with an emphasis on computer networks. Baseband and broadband local area networks, OSI model, logical link protocols, media with an emphasis on fiber-based interfaces, topology, and routing/flow control. Analysis of networks emphasizes simulation techniques.

CPSC 595. Advanced Topics in Computer Science (Credit varies)
Course topics will be selected on the basis of faculty and student interests.

CPSC 611. Communications II (3-3-0)
Prerequisite: CPSC 502
Advanced communications topics including internetworking and transport level protocols, bridges and routers, integrated network traffic, network management software with an emphasis on Unix tools, coding theory and mathematical modeling to include queuing theory.

CPSC 619. Computer Systems Design (3-3-0)
Prerequisites: Completion of 12-15 hours of program requirements.
A design course to integrate knowledge acquired in the program into a research/design effort. This course will serve as a structure for beginning the research/design effort. Course will be held in a seminar setting to allow students to provide weekly reports on the progress of their work. It will also serve as a peer/faculty review process to assist the student in designing a project suitable for the thesis.

CPSC 621. Parallel Processing (3-3-0)
Prerequisite: PHYS 521
Advanced topics in concurrent processor design. Memory and I/O structures for high performance and parallel architectures. Comparison of vector processing machines. SIMD architectures and algorithms. MIMD architectural options. Centralized vs. distributed memory. Shared memory vs. message passing. Algorithms for different MIMD machines. Architectural simulation. Programming experiments on various parallel machines.

CPSC 642. Qualitative Modeling (3-3-0)
Prerequisite: PHYS 501 and CPSC 501
The purpose of this course is to acquaint students with the basic techniques used for qualitative reasoning about physical systems. To understand how to apply these methodologies for design, control, and diagnostic purposes. Students will use state of the art computer tools for building qualitative models and for applying these models for failure diagnosis and other types of analysis.

CPSC 599. Independent Study. 1-4 Credits.

APCS 699. Thesis Research. Credits vary.

Department of Psychology

(College of Social Science and Professional Studies)
Wingfield Hall, Room 116
(804) 594-7094

Chairman: Dr. F. Samuel Bauer

Faculty

PROFESSORS: F. Samuel Bauer, Ph.D.; Lee E. Doerries, Ph.D.; Robert W. Herrmann, Ph.D.; Sanford E. Lopater, Ph.D.
ASSOCIATE PROFESSORS: David E. Dooley, Ed.D.; Dorothy C. Doolittle, Ph.D.; Shelia P. Greenlee, Ph.D.
ASSISTANT PROFESSORS: Karen H. Barnett, Ed.D.; Thomas D. Berry, Ph.D.; Diane Catanzaro, Ph.D.; Timothy Ray Marshall, Ph.D.

Emeritus Faculty

PROFESSORS: Joanne S. Squires, Ph.D.; James C. Windsor, Ed.D.

About the Department

The Department of Psychology serves over 400 undergraduate majors, and supports many other majors by offering service courses, as well as two introductory sequences in the Social Sciences. The department offers a particularly wide range of experiences, including many laboratory and experiential courses in addition to more traditional lecture courses. This broad coverage of the discipline reflects a faculty which is diverse and eclectic.

The Department of Psychology offers a Master of Science in Applied Psychology with a Concentration in Industrial/Organizational Psychology. This is a 42-hour program that will prepare graduates for employment in a variety or organizations and positions. The required coursework is designed around the scientist-practitioner model. Coursework is divided into the core area which presents traditional psychological theory and research and the concentration area which presents psychological theory and research applicable to work organizations. Each student will do thesis research and will receive supervised training in an applied setting. The program will admit 15 to 20 degree-seeking students each fall.

The undergraduate program is subdivided into three concentrations, each preparing students for specific objectives. The General Concentration serves most students who intend to continue their education in clinical/counseling, experimental or most other areas of Psychology. The Industrial/Organizational Concentration serves students who intend to pursue a career in I/O Psychology which is currently an area in great demand. The Early Child Psychology Concentration emphasizes the early developmental phases of human growth, and is structured to serve students who are also seeking State Teaching Certificates in Elementary Education through the Education Department.

The Psychology Department has dedicated laboratories, including an Organizational Psychology Laboratory, and laboratories for General Experimental Psychology, Sensation and Perception, Operant Learning, and Psychophysiology. These laboratories are equipped with state-of-the-art equipment, and are used in support of teaching and both student and faculty research.

The majority of psychology graduates continue their education in some area of psychology or education. The central philosophy of the department is to emphasize the fundamentals of the discipline, presenting psychology as an objective science. This emphasis is consistent with the entry requirements of most American graduate schools of psychology.

Courses of Instruction

PSYC 500. Human Learning (3-3-0)
Review of contemporary theories of cognitive development and learning as they address issues related to the individual's interaction with teacher, peers and educational technologies. Practical applications of theory to classroom environments will be emphasized.

PSYC 501. Advanced Statistics for Social Science Research (3-3-0)
Course covers the theory and application of descriptive and inferential statistics and regressional analysis. Course requires students to have a basic knowledge of statistics. Computer programs are used to analyze and interpret data sets. Advanced topics covered include multivariate analysis, multiple regression, factor analysis and discriminant analysis.

PSYC 503. Training and Development in Organizations (3-3-0)
The process of training in organizations, including training needs assessment and assessment methods, setting training objectives, choosing appropriate training methods, and evaluation of the training program, is a major focus of this course. Related training topics that will be covered include learning issues in training, training particular populations, and training and legal issues. Professional ethics, the delivery of services in organizations and professional identity are also addressed in this course.

PSYC 504. Advanced Social Psychology (3-3-0)
An in-depth examination of the primary theories and research methodology used in Social Psychology. Students will be responsible for leading seminar discussions focusing on such topics as Social Cognition, Attitude Formation, Persuasion, Prejudice and Discrimination, Social Influence, Social Interaction, Group Processes, and Applications of Social Psychology. Students will be expected to apply course concepts to real-world situations and provide comprehensive analyses of the dynamics of the situations.

PSYC 505. Social Perception, Learning and Cognition: Problem Solving and Decision Making (3-3-0)
Principles of social perception, learning and cognition applied to problem solving and decision making. Topics include the relationship between pattern recognition, attention, memory, language and transfer to understanding and predicting effective problem solving and decision making.

PSYC 513. Group Dynamics (3-3-0)
An experiential course on the topics of communication, group goal structure, leadership, decision making, controversy, and conflict in small groups. Students work in small groups to develop and facilitate experiential group exercises illustrating these processes. The class operates as a human relations laboratory where course topics are experienced and analyzed through action learning.

PSYC 523. Organizational Theory (3-3-0)
An in-depth study of the characteristics of organizations and the concepts of organization theory. The focus of the course stresses an open-system perspective which assesses environmental as well as intra-organizational dimensions, informal as well as formal organizational structures and processes, and institutional/social as well as operational/technical levels of management. The course is designed to view organizations as "learning environments" in which participants solve real problems.

PSYC 595. Advanced Topics in Psychology (Credit varies)
Course topics will be selected on the basis of faculty and student interests.

PSYC 599. Independent Study. (1-6 Credits)

PSYC 601. Advanced Research Methods (3-3-0)
Prerequisite: PSYC 501
This course covers research design and methods applicable to organizational settings. Topics include advanced techniques in experimental, quasi-experimental, and correlational research designs, advanced survey methods, threats to internal and external validity, and ethics in organizational research. Students will read primary source material on research design and will develop a thesis-quality research proposal.

PSYC 610. Advanced Tests and Measurements (3-3-0)
Prerequisite: PSYC 501
Course topics include the nature, purposes, uses and development of various psychological tests and measurements. Measurement instruments examined in the course will include intelligence tests, personality measures, measures of attitudes and interests, and measures of aptitudes and special abilities.

PSYC 623. Organizational Psychology (3-3-0)
Course provides an in-depth analysis of theories and issues concerned with work attitudes, work motivation, organizational change, job design, organizational climate and culture, and leadership.

PSYC 633. Advanced Personnel Psychology (3-3-0)
Prerequisite: PSYC 501
Presents research and theory applying psychological principles to the development and management of the Personnel/Human Resources function in organizations. Topics include selection and selection testing, performance measurement and appraisal, and equal employment opportunity and the law. Psychometric theory and statistical analysis of personnel data is emphasized.

PSYC 691. Graduate Practicum in Industrial/Organizational Psychology (3-3-0)
Prerequisites: Completion of the concentration courses in Industrial/Organizational Psychology
Students receive supervised training in an applied setting in the area of industrial/organizational psychology. The student will have an on-site practicum supervisor and a faculty supervisor.

PSYC 699. Thesis Research. Credits vary.

Rector
David L. Peebles
Ordinary, Virginia
Term Expires June 30, 1997

Vice Rector
Carolyn W. Hines
Newport News, Virginia
Term Expires June 30, 1998

Secretary
Lewis A. McMurran, III
Newport News, Virginia
Term Expires June 30,1998

Margaret R. Bowditch
Gloucester, Virginia
Term Expires June 30, 1999

Manuel Deese
Richmond, Virginia
Term Expires June 30, 1996

Robert L. Freeman, Jr.
Newport News, Virginia
Term Expires June 30, 1999

Myrl L. Hairfield
Williamsburg, Virginia
Term Expires June 30, 1999

Robert Hochstein
Washington, D.C.
Term Expires June 30, 1996

Robert McGaw
Williamsburg, Virginia
Term Expires June 30, 1998

Shin-ichiro Nagashima
Williamsburg, Virginia
Term Expires June 30, 1997

Vikki Rehnback
Chesapeake, Virginia
Term Expires June 30, 1997

Mary Louise Reid
Waccabuc, New York
Term Expires June 30, 1996

Paul S. Trible, Jr.
Williamsburg, Virginia
Term Expires June 30, 1998

Harold L. Williams
Newport News, Virginia
Term Expires June 30, 1998

Office of the President

Anthony R. Santoro
President

Dorothy C. Doolittle
Executive Assistant
to the President

Louis J. Noisin
Special Assistant
to the President

Mary E. Cotton
Director of Internal Audit

Academic Affairs

Jouett L. Powell
Provost

Patricia A. Harvey
Assistant to the Provost

Virginia S. Purtle
Dean of the College of Social Science and Professional Studies, Acting Dean of the College of Arts and Humanities, Director of Graduate Studies

George R. Webb
Dean of the College of Science and Technology and Acting Dean of the College of Business and Economics

Wendell A. Barbour
Dean of Academic Support

Administration and Finance

William L. Brauer
Executive Vice President

Cynthia R. Perry
Associate Vice President
for Planning and Budget

Maribeth Trun
Associate Vice President
for Finance and Comptroller

Becky F. Moore
Director of Personnel/Payroll

Gerald D. Smith
Director of University Services

Richard T. White
Director of Plant Operations

Student Services

Robert J. LaVerriere
Acting Director of Admissions

Brenda C. Blount
Director of Student Records and
Acting University Registrar

Myrita S. Savage
Assistant Director of
Student Records

Sidney P. Dugas
Director of Financial Aid

Douglas C. Gallaer
Director of Career and
Counseling Services

Dennis R. Ridley
Director of Assessment and
Evaluation

Marian D. Carrington
Director of Minority
Student Services

Marie F. Hawley
Acting Director of Student Life

Catherine Banks
Acting Director of Student
Activities

Timothy J. Freeman
Student Service Specialist
for Operations

C. J. Woollum
Director of Athletics

Gerald J. Bright
University Police Chief

Steven G. Pappas
Director of Dining Services

Development

David P. Harner
Vice President for Development

Norma J. Brown
Director of the Annual Fund and
Special Projects

Allen M. Wallace
Director of Corporate and
Foundation Relations

James D. Eagle
Director of Sponsored Programs

Members of the graduate faculty of Christopher Newport University are responsible for teaching graduate courses, advising graduate students, directing theses, serving on graduate committees, providing for governance of the graduate programs, and carrying out and encouraging scholarship and research. The graduate faculty exercises faculty jurisdiction over graduate courses and programs; requirements for admission to, continuation in, and graduation from all graduate programs; policies and plans for future development of graduate programs; selection and continuance of graduate faculty members; and the awarding of graduate degrees. The Director of Graduate Studies chairs the Graduate Faculty Council and directs the affairs of the graduate program. The graduate faculty also includes certain provisional members, drawn from the faculty of the University, who are responsible for teaching certain courses in the graduate program. A full listing of all faculty of the University can be found in the *1995-1996 Christopher Newport University Catalog*. Members of the graduate faculty are listed below. This list reflects the status of members of the graduate faculty for 1995-1996 at the time the catalog went to press. Where dates appear, the first date indicates the year when the individual was first appointed as a member of the Christopher Newport University faculty; the second date indicates the year when the present rank was attained.

JOHN E. ANDERSON, JR. (1980, 1963), Professor of Management and Marketing, B.A., University of Akron; Ph.D., Ohio State University.

JOSHUA C. ANYIWO (1990, 1976), Associate Professor of Physics and Computer Science, B.A., M.A., Cambridge University; Ph.D., Colorado State University.

MAUREEN MORRISSEY ARCHER (1992, 1992), Assistant Professor of English, B.A., University of Michigan; M.S., University of Chicago; Ph.D., Purdue University.

JOHN J. AVIOLI (1972, 1987), Professor of Mathematics and Computer Science, B.S., West Chester State College; M.S., Ph.D., University of Delaware.

JANE M. BAILEY (1992, 1992), Assistant Professor of Education, B.A., State University of New York College at Oneonta; M.A., San Diego State University; Ed.D., The College of William and Mary.

WENDELL A. BARBOUR (1983, 1988), Associate Professor of Library Science and Dean of Academic Support, B.A., University of Florida; M.A., M.S.L.S., University of Illinois; J.D., John Marshall Law School.

NANCY R. BARENDSE (1990, 1989), Assistant Professor of English, B.S., Auburn University; M.A. Clemson University; Ph.D., University of South Carolina.

KAREN H. BARNETT (1986, 1992), Assistant Professor of Psychology, B.A. Christopher Newport College; M.Ed., Ed.D, The College of William and Mary.

BOBBYE H. BARTELS (1994, 1994), Assistant Professor of Mathematics, B.A., Lawrence University; M.A., Ph.D., University of Illinois.

MARTIN W. BARTELT (1975, 1982), Professor of Mathematics, B.A., Hofstra University; M.A., Ph.D., University of Wisconsin.

H. MARSHALL BOOKER (1969, 1971), Professor of Economics, B.A., Lynchburg College; Ph.D., University of Virginia.

CLYDE W. BROCKETT (1977, 1994), Professor of Music, A.B., The College of William and Mary; M.A., Ph.D., Columbia University.

A. MARTIN BUONCRISTIANI (1974, 1978), Professor of Physics, B.S., University of Santa Clara; Ph.D., University of Notre Dame.

DIANE CATANZARO (1991, 1991), Assistant Professor of Psychology, B.A., Dickinson College; M.A., Fairleigh Dickinson University; Ph.D., Old Dominion University.

RANDALL H. CATON (1986, 1995), Professor of Physics, B.S., University of Minnesota; M.S., University of Pennsylvania; Ph.D., City University of New York.

C. KEN CHANG (1973, 1990), Professor of Chemistry, B.S., Taiwan National University; Ph.D., University of Notre Dame.

RONNIE COHEN (1983, 1992), Associate Professor of Accounting, B.A., Kirkland College; J.D., LL.M., The College of William and Mary.

HAROLD N. CONES, JR. (1968, 1982), Professor of Biology, B.S., Maryville College; M.A., The College of William and Mary; Ph.D., Bowling Green State University.

LEE E. DOERRIES (1971, 1983), Professor of Psychology, B.A., M.A., The College of William and Mary; Ph.D., University of Rhode Island.

DOROTHY C. DOOLITTLE (1988, 1990), Associate Professor of Psychology, B.A., University of Georgia; M.S., Ph.D., University of Tennessee.

DAVID C. DOUGHTY, JR. (1984, 1989), Associate Professor of Physics and Computer Science, B.A., Rutgers University; Ph.D., University of Pennsylvania.

ROBERT J. DUREL (1971, 1987), Professor of Sociology, A.A., St. Joseph Seminary; B.A., Notre Dame Seminary; M.A., Ph.D., University of Notre Dame.

LATIFA ELOUADRHIRI (1994, 1994), Assistant Professor of Physics and Computer Science, B.S., M.S., University of Rabat (Morocco); Ph.D. , Université Blaise Pascal (France).

JAMES A. FORTE (1990, 1995), Associate Professor of Social Work, B.S., Fordham University; M.S.W., Ph.D., Virginia Commonwealth University.

DAVID E. GAME (1978, 1991), Associate Professor of Computer Science, B.S., Massachusetts Institute of Technology; M.S., The College of William and Mary; Ph.D., Old Dominion University.

SHELIA PARKER GREENLEE (1987, 1991), Associate Professor of Psychology, B.A., Norfolk State University; M.S., Ph.D., Ohio State University.

FREDERICK F. HARTLINE (1985, 1993), Associate Professor of Physics, (part-time), B.A., Reed College; Ph.D., University of Washington.

DAVID P. HEDDLE (1989, 1994), Associate Professor of Physics and Computer Science, B.S., M.S., Ph.D., Carnegie-Mellon University.

DAVID L. HIBLER (1989, 1992), Associate Professor of Physics and Computer Science, B.S., University of Texas; M.S., University of South Carolina; Ph.D., University of Texas.

DONALD W. HICKS (1990, 1991), Associate Professor of Accounting, B.S., C.P.A., University of Virginia; M.S., Louisiana State University; Ph.D., Michigan State University.

JOHN A. HOAGLUND (1972, 1979), Professor of Philosophy, Ph.D., Free University of Berlin.

ROBERT F. HODSON (1990, 1995), Associate Professor of Physics and Computer Science, B.S.E., University of Connecticut; M.S.E., University of Central Florida; Ph.D., Florida State University.

KARA K. KEELING (1993,1993), Assistant Professor of English, B.A., Carleton College; M.A., Purdue University; Ph.D., Indiana University.

PARVIZ KHAJEH-KHALILI (1985, 1991), Associate Professor of Mathematics, B.S., Arya Mehr (Sharif) University of Technology; M.S., Michigan State University; Ph.D., University of Michigan.

PETER A. KNIPP (1992, 1992), Assistant Professor of Physics and Computer Science, A.B., Princeton University; M.S., Ph.D., University of Chicago.

SEUNGUG KOH (1994, 1994), Assistant Professor of Physics and Computer Science, B.S., Korea University, M.S., Rose-Hulman Institute of Technology; Ph.D., University of Cincinnati.

STAVROULA E. KOŠTAKI-GAILEY (1974, 1993), Professor of Mathematics, A.A., Warren Wilson College; B.A., University of North Carolina, Asheville; M.A., Western Carolina University; Ed.D., University of North Carolina, Greensboro.

LYNN LAMBERT (1992, 1992), Assistant Professor of Computer Science, B.A., Wellesley College; M.S., Shippensburg University; Ph.D., University of Delaware.

FABRICE E. LEHOUCQ (1992, 1992), Assistant Professor of Government and Public Affairs, B.A., University of Pittsburgh; M.A., Ph.D., Duke University.

ZUHJUN L. LI (1992, 1992), Assistant Professor of Physics and Computer Science, B.Sc., Nankai University; Ph.D., Virginia Polytechnic Institute and State University.

ENRIQUE A. MÁRQUEZ-CASTELLANOS (1992, 1992), Associate Professor of Spanish, B.A., M.A., Ph.D. University of Miami.

TIMOTHY RAY MARSHALL (1992, 1992), Assistant Professor of Psychology, B.S., University of Idaho; M.S., Ph.D., Virginia Polytechnic Institute and State University.

MAYES D. MATHEWS (1991, 1991), Associate Professor of Management and Marketing, B.S.B.A., West Virginia University; M.B.A., Old Dominion University; Ph.D., Virginia Commonwealth University.

BUCK G. MILLER (1976, 1984), Associate Professor of Government and Public Affairs, B.A., Gettysburg College; M.P.A., Ph.D., New York University.

JAMES M. MORRIS (1971, 1977), Professor of History, A.B., Aquinas College; M.A., Central Michigan University; Ph.D., University of Cincinnati.

ROARK R. MULLIGAN (1994,1994), Assistant Professor of English, B.A., University of California (Berkeley); M.S., M.A., Ph.D., University of Oregon.

JAY S. PAUL (1978, 1987), Professor of English, B.A., Hartwick College; M.A., Ph.D. Michigan State University.

SCOTT POLLARD (1992, 1992), Assistant Professor of English, B.A. Santa Clara University; M.A., Ph.D., University of California, Irvine.

JOUETT L. POWELL (1978, 1989), Professor of Philosophy and Religious Studies and Provost of the University, B.A., Baylor University; B.D., Southern Baptist Theological Seminary; M.Phil., Ph.D., Yale University.

VIRGINIA S. PURTLE (1989, 1981), Professor of Sociology and Dean of the College of Social Science and Professional Studies, Acting Dean of the College of Arts and Humanities, Director of Graduate Studies, B.S., M.S., Oklahoma State University; Ph.D., Louisiana State University.

CHRISTINA C. RAMIREZ-SMITH (1992,1992), Assistant Professor of Education, B.S., University of Idaho; M.S., Morgan State University; Ed.D., Boston University.

ROBERTA K. ROSENBERG (1986, 1991), Associate Professor of English, B.A., Queens College (CUNY); Ph.D., University of North Carolina, Chapel Hill.

ANTHONY R. SANTORO (1987, 1976), Professor of History and President of the University, A.B., College of the Holy Cross; M.A., University of California; Ph.D., Rutgers University.

BARBARA A. SAVITZKY (1990, 1990), Assistant Professor of Biology, B.A., Ph.D., University of Tennessee.

RAOUF L. SELIM (1986, 1991), Associate Professor of Physics, B.S.E.E., Cairo University; B.S., Ain Shams University (Cairo); M.A., Ph.D., Temple University.

ANTONIO C. SIOCHI (1990, 1995), Associate Professor of Computer Science, B.S., Ateneo de Manila University; M.S., Ph.D., Virginia Polytechnic Institute and State University.

MARSHA M. SPRAGUE (1992, 1992), Assistant Professor of Education, B.A., Wellesley College; M.E., Pennsylvania State University; Ed.D., University of Miami.

ARLENE A. STEPNICK (1989, 1987), Associate Professor of Nursing, B.S., Hampton University; M.S., Old Dominion University; Ph.D., University of Texas.

ALINE M. STOMFAY-STITZ (1991, 1991), Associate Professor of Education, B.A., Barnard College of Columbia University; M.A., Case Western Reserve University; Ed.D., Northern Illinois University.

DAVID L. WALL (1992, 1990), Assistant Professor of Government and Public Affairs, B.S, Kansas State University; M.A., Ph.D., University of Iowa.

GEORGE R. WEBB (1973,1976), Professor of Physics and Dean of the College of Science and Technology and Acting Dean of the College of Business and Economics, A.A., Old Dominion University; B.S. Massachusetts Institute of Technology; Ph.D., Virginia Polytechnic Institute and State University.

GARY J. WHITING (1993, 1993), Assistant Professor of Biology, B.S., University of Cincinnati; Ph.D. University of South Carolina.

ROBERT C. WINDER (1991, 1986), Associate Professor of Economics and Finance, A.B., Rutgers College; M.A., University of Connecticut; Ph.D., Rutgers University.

GEORGE K. ZESTOS (1993, 1993), Assistant Professor of Economics and Director of the Center for Economic Education, B.A., Aristotelian University of Thessaloniki (Greece), Saginaw Valley State University; M.A., Michigan State University; Ph.D., Indiana University.

Christopher Newport University Degree Programs

Master of Arts in Teaching
- Language Arts
  - Elementary
  - Middle School (option-Licensure Track Available)
  - Secondary (option-Licensure Track Available)
- Mathematics
  - Elementary
  - Middle School (option-Licensure Track Available)
  - Secondary (option-Licensure Track Available)
- Science
  - Middle School (option-Licensure Track Available)

Master of Science in Applied Physics
- Instrumentation and Advanced Computer Systems
- Dynamical Systems
- Solid State Systems

Master of Science in Applied Psychology
- Industrial/Organizational Psychology

Master of Science in Environmental Science
- General Environmental Studies

Master of Science in Nursing
- Nurse Case Manager Specialization

Departments in addition to the ones listed may, from time to time, offer topics courses or educational recertification courses at the graduate level.

- Checklist for Application to CNU Graduate Study -

Please check to be sure that you have enclosed the following in your completed application:

__ Application Form and In-State Tuition Form, if applicable
__ Application Fee and Admissions Fee Form
__ Official Transcript(s)
  Unclassified Status - Baccalaureate institution only
  Classified Status - All colleges and universities attended

All Classified Status Applicants:
__ Three (3) Letters of Recommendation in sealed, signed envelopes
__ GRE Scores from the General Test (taken within 5 years prior to the date of admission)

M. S. in Applied Psychology Additional Classified Admission Requirements:
__ GRE Score from the Psychology Subject Test (taken within 5 years prior to the date of admission)
__ Written Essay (An essay, not to exceed two double spaced typewritten pages in length, describing your interest in Industrial/Organizational Psychology. Include a discussion of specific topic areas, research interests, and/or applications that are of interest to you. Feel free to describe the ways in which this degree fits into your career objectives.)

M. S. in Nursing Additional Admissions Requirements
__ See specific requirements in the catalog, page 47

All information should be sent to:

Christopher Newport University
Graduate Admissions
50 Shoe Lane
Newport News, VA 23606-2998

Application for Admission to Graduate Study

CHRISTOPHER NEWPORT CNU UNIVERSITY

OFFICE USE ONLY
Amount Paid:
$40 _____ $15 _____
Date Rec'd: _____
Initials: _____
ID _____

1) Name _____
Last First M.I. Former/Maiden

2) Social Security Number ___-___-____

3) Permanent Mailing Address _____
Number & Street City State Zip Code

4) Daytime Telephone: Area Code _____ # _____ 5) (Circle one) Mr. Mrs. Ms.

6) Male _____ Female _____ 7) Application for: Fall _____ Spring _____ Summer _____ 19 ____

8) Application type (see *Graduate Catalog*): CLASSIFIED _____ UNCLASSIFIED _____

_____ **Initial Admission** (If you have never applied for graduate admission to CNU)

_____ **Re-Admission** (When did you last attend CNU as a graduate student?) _____

_____ **Re-Open** (If you were admitted to graduate study at CNU within the past two semesters but withdrew or did not attend) Which semester? _____

9) Check if you plan to attend full-time (9 credits in fall/spring, 6 credits in summer) _____

FOR OFFICE USE ONLY	MAJOR _____	EXTENSION _____	FOR OFFICE USE ONLY
	ADVISOR _____	ADVISOR ID _____	

10) Degree Program:
M.A.T. _____ Field of Study & Educational Level: _____
M.A.T. with Licensure _____ Field of Study & Educational Level: _____
M.S. _____ Field of Study: _____
Recertification Class only _____ Field of Study: _____

11) Date of Birth _____

12) Country of Citizenship _____ If a resident alien, provide green card number _____

13) Check ethnic designation (for federal reporting purposes): ____ American Indian or Alaskan Native

____ Asian or Pacific Islander ____ Black, Non-Hispanic _____ Hispanic _____ White, Non-Hispanic

14) If you wish to officially claim a disability, please check: _____ (Information will be mailed to you.)

15) If you plan to use Veterans Administration education benefits, please check: _____

16) Virginia Domicile: Domicile is a technical, legal concept (Section 23-7.4, Code of Virginia) and is the place (state) where a person resides with the unqualified intention of remaining indefinitely, with no intention of leaving. Do you wish to apply for in-state tuition charges based on Virginia domicile? ____Yes ____No (If yes, Commonwealth of Virginia law requires that you complete the attached Application for Virginia In-State Tuition Rates form.)

See Reverse

17) If you are not a US citizen and are here on a visa, please furnish: Visa Type _____ Expiration _____

18) Your current employer _____
Name City State

Dates of Employment _____ Current Position Title _____

19) Are you currently certified by the Commonwealth of Virginia to teach in Virginia? Yes___ No___

Teaching Endorsement Area(s) _____

20) Education

If you are a classified applicant, list all colleges attended, indicate colleges awarding graduate credit, beginning with the most recent college.

If you are an unclassified applicant, list only the college where you earned your bachelor's degree.

FAILURE TO LIST THE COLLEGES REQUIRED WILL RESULT IN CANCELLATION OF YOUR ADMISSION TO THE UNIVERSITY AND OF YOUR REGISTRATION IN CLASS.

Name of College	Location City/State	Dates of Attendance	Credits Earned	Degree Earned	Date of Graduation

21) Are you in good academic standing (eligible to return) at your most recently attended college? Yes___ No___

22) Has disciplinary action ever been taken against your at any of the colleges you have ever attended, including Christopher Newport University? If yes, attach letter with all details. Yes___ No___

23) Have you ever been suspended, dropped for academic deficiencies, been administratively withdrawn for academic reasons, or otherwise been declared ineligible to attend any college?
If yes, attach letter with all details. Yes___ No___

24) If you are applying for classified admission, please have the Educational Testing Service (ETS) send your Graduate Record Examination (GRE) scores to Code 5128 (Christopher Newport University). If your native language is not English and you have not graduated from an institution in an English speaking country, your must present a minimum score of 550 from the Test of English as a Foreign Language (TOEFL).

Date(s) on which you have taken or plan to take the GRE _____

Verbal Score _____ Quantitative Score _____ Analytical Score _____

I certify that the information contained herein is true and correct. I agree to abide by the rules, regulations and Honor Code of Christopher Newport University, should I be offered admission. I also understand that any information supplied in support of this application will be treated as confidential by the University and will not be divulged to any other party, except as permitted by law.

_____ _____
Signature of Applicant Month/Date/Year

CHRISTOPHER NEWPORT UNIVERSITY

APPLICATION FOR VIRGINIA IN-STATE TUITION RATES

re you planning to pay the Virginia in-state tuition rate?
o, Virginia law (Section 23.7-4, Code of Virginia) requires that you answer all required questions on this form.
is is true even if you have been domiciled in Virginia all of your life.
is important that you read the questions carefully and answer them thoroughly, providing as much information as possible, even if you e to attach additional sheets.
CTION A must be completed by the person making application for admission to the University.
CTION B (on the reverse) must be completed by the applicant's parent or legal guardian if the applicant is under the age of 19 and ot married or if the applicant is a dependent.
e CNU Office of Admissions will review this form to determine whether or not you qualify for the in-state tuition rate.

CTION A

Term: Fall _____ Spring _____ Summer 19_____

Name of Applicant: _____
Last First M.I.

Social Security Number: _____ Date of Birth: _____

Are you a U.S. citizen? _____ If "no," give visa type and expiration date: _____

How long have you lived in Virginia? (you must provide dates) _____

List your addresses for the past two years

_____

_____

Do your parents or legal guardian(s) provide over half of your financial support or claim you as a tax dependent? _____
If "yes," SECTION B must be completed by the parent or legal guardian.
Will you have filed a tax return or paid income tax to any state other than Virginia in the past 12 months? _____

If "yes," which state? _____
For the entire 12 months prior to the term in which you plan to enroll, will you have:
a) filed a tax return or paid income taxes to Virginia on all earned income? _____
b) been a registered voter in Virginia? _____ Voter registration date (month and year): _____
c) held a valid Virginia driver's license? _____ Date the license was issued? (month and year): _____
Do you own or operate a motor vehicle? _____ If "yes," in which state is it registered? _____
For the year preceding the term in which you plan to enroll have you been employed? _____ If "yes," provide details, below.

From	To	Employer's Name & Address

Are you or is any member of your family presently in the U.S. military? _____ If "no," go to question 16.

If "yes," (circle one) I am my spouse is my parent/legal guardian is in the U.S. military.

Will Virginia income taxes have been paid on all military income for the 12-month period prior to the term in which you plan to enroll? _____
If your spouse is in the U.S. military, will you have resided in Virginia, earned at least $8,800, and paid income taxes to Virginia for at least one year prior to the term in which you plan to enroll? _____ If "yes," attach a copy of your Virginia income tax forms.
If you answered "no" to questions 13 and 14, attach a copy of the military orders or other military-acknowledged document(s) confirming the move to Virginia.
Do you have the present intent to remain indefinitely in Virginia? _____

rify, under penalty of disciplinary action, that the information I have provided is true.

_____ _____
ature of applicant Date of signature

APPLICATION FOR VIRGINIA IN-STATE TUITION RATES: SECTION B

(This section must be completed by the applicant's parent/legal guardian)

1. Name of parent or legal guardian: _____
   Last First M.I.
2. Relationship to the applicant: _____
3. Are you a U.S. citizen? _____ If "no," give visa type and expiration date: _____
4. How long have you lived in Virginia? (you must provide dates) _____
5. List your addresses for the past two years:

_____

_____

8. Will you have filed a tax return or paid income tax to any state other than Virginia in the past 12 months? _____

   If "yes," which state? _____
9. Will you have claimed the applicant as a dependent on your federal and Virginia income tax returns for the entire 12 months prior to the term in which the applicant plans to enroll? _____
10. Will you have provided over half of the applicant's financial support for the entire 12 months prior to the term in which the applicant plans to enroll? _____
11. For the year preceding the term in which the applicant plans to enroll have you been employed? _____
    If "yes," provide details, below.

    From To Employer's Name & Address

_____

_____

11. For the entire 12 months prior to the term in which the applicant plans to enroll, will you have:
    a) filed a tax return or paid income taxes to Virginia on all earned income?
    b) been a registered voter in Virginia? _____ Voter registration date (month and year): _____
    c) held a valid Virginia driver's license? _____ Date the license was issued? (month and year): _____
12. Do you own or operate a motor vehicle? _____ If "yes," in which state is it registered? _____
13. Are you or your spouse in the U.S. military? _____ If "no," go to question 17.

    If "yes," (circle one) I am my spouse is in the U.S. military.
14. Will Virginia income taxes have been paid on all military income for the 12-month period prior to the term in which the applicant plans to enroll? _____
15. If you answered "no" to the previous question, will the applicant's non-military parent/guardian have resided in Virginia, earned at least $8,800, paid Virginia income taxes, and claimed the applicant as a dependent for both federal and Virginia income tax purposes, for at least one year prior to the term in which the applicant plans to enroll? _____ If "yes," attach a copy of the non-military parent's/guardian's Virginia income tax forms.
16. If you answered "no" to questions 14 and 15, attach a copy of the military orders or other military-acknowledged document(s) confirming the move to Virginia.
17. Do you have the present intent to remain indefinitely in Virginia? _____

I certify, under penalty of disciplinary action, that the information I have provided is true.

_____ _____

Signature of applicant's parent or legal guardian Date of signature

CHRISTOPHER NEWPORT UNIVERSITY
LETTER OF RECOMMENDATION FOR GRADUATE STUDY

SECTION 1 (to be completed by applicant)
The following information must correspond to the information submitted on your application for graduate studies. Indicate your decision regarding a waiver of the right of access to this letter of recommendation before giving it to the person who will be submitting the recommendation. You should then give this form, along with a self-addressed and stamped envelope, to your reference. Have that person place the completed recommendation into the envelope, seal it, and sign across the seal. The envelope should be returned to you, and you should return it with your application. Do not return separately. Advise your reference if the letter is also to be used as a recommendation for financial assistance.

SOCIAL SECURITY NUMBER (leave blank, if you do not have a U.S. Social Security Number) ___-___-____

NAME: _____
Last (Family Name) First Middle

PROGRAM FOR WHICH YOU ARE APPLYING: (Complete these items as you have completed them on your application.)

_____ _____ _____
Degree Program Specialization (if applicable) Track (if applicable)

TERM AND YEAR OF ENTRY: ___ Fall 19___ ___ Spring 19___ ___ Summer 19___

NAME OF REFERENCE: _____

The Family Education Rights and Privacy Act of 1974 and its amendments guarantee students access to their educational records. Students, however, are entitled to waive their right of access concerning recommendations. The following signed statement is the applicant's wish regarding this recommendation.

___ I waive my right to inspect the contents of this recommendation.

___ I do not waive my right to inspect the contents of this recommendation.

_____ _____
Signature Date

_____ _____
Signature Date

SECTION 2 (to be completed by reference)
Christopher Newport University values your comments on the suitability of this applicant to do graduate work and will hold your comments in confidence if the applicant has signed the above waiver.
How long, and in what capacities have you known the applicant? _____

_____

Please carefully assess the applicant in the following areas. In making your assessment, compare the applicant to other individuals you have known who have similar levels of experience and education.

	Superior	Good	Average	Poor	Unknown
Intellectual ability	___	___	___	___	___
Ability to analyze a problem and formulate a solution	___	___	___	___	___
Competence in applicant's general field	___	___	___	___	___
Self-reliance	___	___	___	___	___
Leadership	___	___	___	___	___
Creativity/innovation	___	___	___	___	___
Motivation	___	___	___	___	___
Self-discipline	___	___	___	___	___
Cooperativeness	___	___	___	___	___
Oral communication skills	___	___	___	___	___
Written communication skills	___	___	___	___	___
Initiative	___	___	___	___	___
Reliability	___	___	___	___	___

Please use the space on the other side of this application to elaborate on the applicant's qualifications.

RECOMMENDATION

We are interested in obtaining an accurate profile of the applicant's capability for graduate study. The check-off items appearing on the previous page sometimes do not provide the opportunity to characterize an applicant fully. Please give any additional comments in the space below. We would especially appreciate comments on the applicant's intellectual capability, motivation for seeking graduate education, and prospects for completing graduate education (e.g. perseverance, work habits, organization). In addition, if the applicant is applying to a professional curriculum, we are interested in your comments about the applicant's professional attitudes and behaviors. This form may also be used as a recommendation for financial assistance, such as teaching or research assistance or fellowships.

Your overall assessment of the applicant as to his or her ability to complete an advanced academic degree:

___Highly recommended ___ Recommend with reservations

___Recommend ___ Not recommended

Signature_____Date _____

Please print name _____

Institution _____

Your position _____ Telephone number (____) _____

Please place the completed form in the addressed and stamped envelope provided by the applicant. Please be sure to seal the envelope and sign it across the seal before returning it to the applicant. Thank you for assisting Christopher Newport University with its graduate study application process.

CHRISTOPHER NEWPORT UNIVERSITY
LETTER OF RECOMMENDATION FOR GRADUATE STUDY

SECTION 1 (to be completed by applicant)
The following information must correspond to the information submitted on your application for graduate studies. Indicate your decision regarding a waiver of the right of access to this letter of recommendation before giving it to the person who will be submitting the recommendation. You should then give this form, along with a self-addressed and stamped envelope, to your reference. Have that person place the completed recommendation into the envelope, seal it, and sign across the seal. The envelope should be returned to you, and you should return it with your application. Do not return separately. Advise your reference if the letter is also to be used as a recommendation for financial assistance.

SOCIAL SECURITY NUMBER (leave blank, if you do not have a U.S. Social Security Number) ___-___-____

NAME: _____
Last (Family Name) First Middle

PROGRAM FOR WHICH YOU ARE APPLYING: (Complete these items as you have completed them on your application.)

_____ _____ _____
Degree Program Specialization (if applicable) Track (if applicable)

TERM AND YEAR OF ENTRY: ___ Fall 19___ ___ Spring 19___ ___Summer 19___

NAME OF REFERENCE: _____

The Family Education Rights and Privacy Act of 1974 and its amendments guarantee students access to their educational records. Students, however, are entitled to waive their right of access concerning recommendations. The following signed statement is the applicant's wish regarding this recommendation.

___ I waive my right to inspect the contents of this recommendation.

___ I do not waive my right to inspect the contents of this recommendation.

_____ _____
Signature Date Signature Date

SECTION 2 (to be completed by reference)
Christopher Newport University values your comments on the suitability of this applicant to do graduate work and will hold your comments in confidence if the applicant has signed the above waiver.
How long, and in what capacities have you known the applicant? _____

Please carefully assess the applicant in the following areas. In making your assessment, compare the applicant to other individuals you have known who have similar levels of experience and education.

	Superior	Good	Average	Poor	Unknown
Intellectual ability	___	___	___	___	___
Ability to analyze a problem and formulate a solution	___	___	___	___	___
Competence in applicant's general field	___	___	___	___	___
Self-reliance	___	___	___	___	___
Leadership	___	___	___	___	___
Creativity/innovation	___	___	___	___	___
Motivation	___	___	___	___	___
Self-discipline	___	___	___	___	___
Cooperativeness	___	___	___	___	___
Oral communication skills	___	___	___	___	___
Written communication skills	___	___	___	___	___
Initiative	___	___	___	___	___
Reliability	___	___	___	___	___

Please use the space on the other side of this application to elaborate on the applicant's qualifications.

RECOMMENDATION

We are interested in obtaining an accurate profile of the applicant's capability for graduate study. The check-off items appearing on the previous page sometimes do not provide the opportunity to characterize an applicant fully. Please give any additional comments in the space below. We would especially appreciate comments on the applicant's intellectual capability, motivation for seeking graduate education, and prospects for completing graduate education (e.g. perseverance, work habits, organization). In addition, if the applicant is applying to a professional curriculum, we are interested in your comments about the applicant's professional attitudes and behaviors. This form may also be used as a recommendation for financial assistance, such as teaching or research assistance or fellowships.

Your overall assessment of the applicant as to his or her ability to complete an advanced academic degree:

___Highly recommended ___ Recommend with reservations

___Recommend ___ Not recommended

Signature_____ Date _____

Please print name _____

Institution _____

Your position _____ Telephone number (___) _____

Please place the completed form in the addressed and stamped envelope provided by the applicant. Please be sure to seal the envelope and sign it across the seal before returning it to the applicant. Thank you for assisting Christopher Newport University with its graduate study application process.

CHRISTOPHER NEWPORT UNIVERSITY
GRADUATE STUDIES
COLLEGE TRANSCRIPT FORM

NOTE: This request is to be sent to your previous college, **not** returned to Christopher Newport University.

TO:_____
Name of College or University

PLEASE SEND AN OFFICIAL COPY OF MY TRANSCRIPT TO:
OFFICE OF ADMISSIONS
ATTN: GRADUATE ADMISSIONS
CHRISTOPHER NEWPORT UNIVERSITY
50 SHOE LANE
NEWPORT NEWS, VA 23606-2998

Student Name:_____
Last First M.I. Former

Social Security Number:_____

Dates of Attendance:_____

Date of Birth:_____
Month Day Year

Student Signature:_____ Date:_____
Month Day Year

CHRISTOPHER NEWPORT UNIVERSITY
GRADUATE STUDIES
COLLEGE TRANSCRIPT FORM

NOTE: This request is to be sent to your previous college, **not** returned to Christopher Newport University.

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ATTN: GRADUATE ADMISSIONS
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50 SHOE LANE
NEWPORT NEWS, VA 23606-2998

Student Name:_____
Last First M.I. Former

Social Security Number:_____

Dates of Attendance:_____

Date of Birth:_____
Month Day Year

Student Signature:_____ Date:_____