

APPENDIX K



The University of North Carolina

OFFICE OF THE PRESIDENT

POST OFFICE BOX 2688, CHAPEL HILL, NC 27515-2688

MOLLY CORBETT BROAD, *President*

Telephone: (919) 962-1000 FAX: (919) 843-9695

E-mail: mbroad@northcarolina.edu

Appalachian State
University

East Carolina
University

Elizabeth City
State University

Fayetteville State
University

North Carolina
Agricultural and
Technical State
University

North Carolina
Central University

North Carolina
School of
the Arts

North Carolina
State University
at Raleigh

University of
North Carolina
at Asheville

University of
North Carolina
at Chapel Hill

University of
North Carolina
at Charlotte

University of
North Carolina
at Greensboro

University of
North Carolina
at Pembroke

University of
North Carolina
at Wilmington

Western Carolina
University

Winston-Salem
State University

An Equal Opportunity/
Affirmative Action
Employer

January 9, 2003

MEMORANDUM

TO: Committee on Educational Planning, Policies, and Programs

FROM: Molly Corbett Broad *M. Broad*

SUBJECT: Licensure of Virginia Polytechnic Institute and State University and Wake Forest University to Offer Degree Programs at Winston-Salem, North Carolina

The Board of Governors of the University of North Carolina is charged under North Carolina General Statute Section 116-15 with responsibility for licensing nonpublic educational institutions to conduct post-secondary degree activity in North Carolina. On February 8, 1974, the Board adopted its rules and standards for licensing nonpublic educational institutions to confer degrees. Following several refinements of the rules and standards, the Board on October 9, 1998, approved the present revision in compliance with 1984 amendments to G.S. 116-15 and in recognition of the growing importance of distance learning in the delivery of instruction.

On December 16, 2002, Charles W. Steger, president at Virginia Polytechnic Institute and State University, applied on behalf of Virginia Polytechnic Institute and State University and Wake Forest University for licensure to conduct degree programs in the following areas:

Master of Science degree in Biomedical Engineering.

Doctor of Philosophy degree in Biomedical Engineering.

In response, Dr. George A. Antonelli conducted a review to judge whether the institution meets criteria for licensure as set forth by the Board of Governors of the University of North Carolina.

Dr. Antonelli recommended that the institution be licensed to conduct the degree programs at Winston-Salem, North Carolina. The Office of the President concurs with Dr. Antonelli's recommendations.

Therefore, I recommend that a regular license be issued to Virginia Polytechnic Institute and State University and Wake Forest University to conduct the degree programs listed above at Winston-Salem, North Carolina.

Enclosure: Review Report.

Application for Licensure in North Carolina
Virginia Tech-Wake Forest School of Biomedical Engineering and Sciences
Joint M.S. and Ph.D. Programs in Biomedical Engineering

Standard 1

(Charter)

That the institution is state-chartered. If chartered by a state or a sovereignty other than North Carolina, the institution shall also obtain a Certificate of Authority to Transact Business or to Conduct Affairs in North Carolina issued by the Secretary of State of North Carolina. [G.S. 116-15(f)(1)]

Virginia Polytechnic Institute and State University (Virginia Tech) is a state corporation and agency of the Commonwealth of Virginia. It was created by the General Assembly of the Commonwealth of Virginia pursuant to Section 23-114, et seq., *Code of Virginia, as amended* and it remains under the control of the General Assembly.

Full documentation is maintained in the Office of the President, 210 Burruss Hall, and through the [Virginia Legislative Information System](#).

As a public agency of the State, Virginia Tech is not separately chartered or licensed by the Corporation Commission of the Commonwealth of Virginia as a corporate entity. Daniel Crabbe of the Office of the Secretary of State for North Carolina, Corporations Division, (919-807-2057) confirmed that a Certificate of Authority was not necessary or appropriate for Virginia Tech since we were a public entity and not a limited liability corporation seeking to operate in the state of North Carolina.

The address of the principal office is published in the catalog, page 2. The membership of the Board of Visitors appears on page 218 of the catalog.

All references to the catalog refer to the Virginia Tech “Graduate Policies & Procedures & Course Catalog 2001-2003” available at: <http://www.grads.vt.edu/prospective/graduatecatalog.pdf>. Page numbers refer to the pdf document.

Standard 2

(Period Of Operation)

That the institution has been conducting post-secondary degree activity in a state or sovereignty other than North Carolina during consecutive, regular-term academic semesters, exclusive of summer sessions, for at least the two years immediately prior to submitting an application for licensure under this section, or has been conducting with enrolled students, for a like period in this State or some other state or sovereignty, post-secondary educational activity not related to a post-secondary degree; provided, that an institution may be relieved temporarily of this standard under the conditions set forth [by the Board of Governors]. [G.S. 116-15(f)2 and G.S. 116-15(i)]

Virginia Tech has been operating its graduate program continuously since 1907. (Catalog page 7).

Standard 3

(Program of Study)

That the substance of each course or program of study, equivalent experience, or achievement test is such as may reasonably and adequately achieve the stated objective for which the study, experience, or test is offered or to be certified as successfully completed. [G.S. 116-15(f)(3)]

Academic Goals for Students

Overall Academic Goals: Students graduating from the M.S. and Ph.D. BME programs will be expected to have gained knowledge and expertise in engineering, science, and medicine for the advancement of human and/or animal health through cross-disciplinary activities that integrate engineering sciences with biomedical sciences and clinical practice. These activities include their dissertation research, academic courses, and interactions with faculty, students, and colleagues. Upon completing the program these students will be able to apply this expertise to acquire new knowledge and understanding of living systems and/or develop new devices, algorithms, processes and systems that advance biology and medicine and improve medical practice and health care delivery.

Expected Learning Outcomes: Upon completion of the program, it is expected that each student will

- Possess an integrated knowledge and expertise base in engineering, science, and medicine that can be used for the advancement of human health.
- Have obtained the analytical and experimental tools and skills necessary to address and solve problems related to biomedical engineering.
- Have a demonstrated ability to integrate engineering fundamentals and problem solving skills with an understanding of the life sciences to acquire new knowledge and understanding of living systems and/or develop new devices, algorithms, processes and systems that advance biology and medicine and improve medical practice and health care delivery.
- Be able to work and communicate effectively with colleagues from different academic fields individually and/or as a team.
- Be able to effectively disseminate their knowledge and their research findings.
- Have an understanding of the clinical limitations and constraints when addressing human and/or animal health issues (Ph.D. students).
- Have a demonstrated understanding of the issues related to medical ethics and responsibilities (Ph.D. students).

Requirements for the BME M.S. Degree

Degree Requirements: Students pursuing a BME M.S. degree must take 21-23 course credit hours and 7-9 thesis credit hours for a minimum total of 30 credit hours. Course requirements for the M.S. thesis degree option are shown in Table 1.

Major Professor: Prior to the completion of 9 credit hours toward the degree, each student must select a SBES faculty member who will serve as the student's major professor, supervise the student's research, and chair the advisory committee.

Student Advisory Committee: The advisory committee is composed of the major professor and a minimum of 2 other faculty members, one of which must be in engineering. (Advisory committee members can be from either institution.)

Program of Study: A program of study should be completed as soon as the student selects his or her Advisory Committee and prior to completing 12 credit hours towards the degree. The program of study must be approved by the student's Advisory Committee and the SBES Graduate Committee prior to submission to the graduate school. The program of study outlines the specific courses to be taken by the student in fulfillment of the degree following the requirements shown in Table 1. Lists of approved courses at Virginia Tech and Wake Forest University appear in Tables 5 through 8.

Final Examination: All M.S. students must pass an oral comprehensive examination given by the advisory committee covering the student's coursework and thesis research upon completing all other degree requirements. A copy of the thesis approved by the student's major professor shall be provided to each of the committee members no less than one week prior to the examination. To complete the program, students must pass the final examination, including approval of the thesis. A student is considered to have passed the examination and have the thesis approved if he/she receives no more than one negative vote on the oral examination or on the thesis.

Table 1. Course Requirements for BME M.S. Program

Subject	Course Number	Title	No. Credits Required
Biomedical Engineering (6 credits)	BME 5204	Introduction to Biomedical Engineering	3
	BME 5000 or 6000 level	3 credit hours from approved list	3
Life Sciences (4 credits)	BME 5104	Mammalian Physiology	4
Electives (11-13 credits)	4000 level	Approved by Advisory Committee	Total throughout program ≤ 6
	5000 or 6000 Level	Approved by Advisory Committee	5-13
Total Course Requirements:			21-23
Thesis Research (7-9 credits)	BME 5994	Research & Thesis	7-9
Total Number of Credit Hours (Courses + Thesis):			30

Degree Requirements for the BME Ph.D. Degree

Degree Requirements: Students pursuing a BME Ph.D. degree must take a minimum of 90 course credit hours beyond the B.S. degree as shown in Table 2. An M.S. degree is not required for admission to the program. Of these 90 hours, 40-54 equivalent credit hours, including the M.S. thesis may be taken for research and dissertation (BME 5994 and 7994). The descriptions of the required courses are provided in Section 1.2.6.

Major Professor: As early as possible, each student must select a SBES faculty member who will serve as the student's major professor, supervise the student's research, and chair the advisory committee.

Student Advisory Committee: Prior to submitting a program of study and prior to the completion of 9 credit hours, each student must form an Advisory Committee. The Advisory Committee is composed of the major professor and a minimum of 4 other faculty members. At least two must be SBES faculty members (including the Chair), and at least three members must be in engineering. (Advisory committee members can be from either institution. It is highly encouraged for the student to have a non-engineering faculty member from the WFUSM and/or the VMRCVM on the committee.)

Program of Study: A program of study should be completed as soon as the student selects his or her Advisory Committee and prior to completing 12 hours. The program of study must be approved by the student's Advisory Committee and the SBES Graduate Committee prior to submission to the graduate school. The program of study outlines the specific courses to be taken by the student in fulfillment of the degree following the requirements shown in Table 2. Note that in addition to the course requirements, the program requires a clinical rotation for all Ph.D. students, along with completion of a six hour (hours, not credits) medical ethics program, titled "Responsible Conduct of Science" taught by WFU.

Qualifying Examination: This examination serves to evaluate the student's mastery of fundamental knowledge and to diagnose deficiencies. The examination must be taken by the end of the second year for students entering directly into the Ph.D. program or within one year of entering the program after completing the M.S. degree. Written examinations will be given in mathematics, biomedical engineering (including life sciences), and at least one specialty area in biomedical engineering.

Preliminary Examination: All Ph.D. students must take an oral preliminary examination administered by the student's advisory committee. The student will present their dissertation research proposal, and the examination will cover all course material and the proposed research plan, including the student's knowledge of the literature, and the feasibility and originality of the proposed work. The examination should be taken at or near the completion of the coursework and must be taken at least one year prior to completion of the final examination. A written copy of the research proposal must be provided to each of the advisory committee members at least one week prior to the examination. The student's advisory committee must approve the research topic and plan in order for the student to continue in his or her research studies.

Final Examination: All Ph.D. students must pass an oral examination or defense of the dissertation upon completing all other degree requirements and at a minimum of one year after the preliminary examination. Prior to this examination, a copy of the dissertation approved by the student's major professor shall be provided to each of the committee members at least two weeks prior to the examination. To complete the program, students must pass the final examination, including approval of the dissertation in final form. A student is considered to have passed the examination and have the dissertation approved if he/she receives no more than one negative vote on the oral examination or on the dissertation.

Time to Completion: It is expected that students will take from three to five years to complete the degree, depending on the student's background and research interests.

Table 2. Course Requirements for BME Ph.D. Program

Subject	Course Number	Title	No. Credits Required
Biomedical Engineering (6 credits)	BME 5204	Introduction to Biomedical Engineering	3
	BME 5000 or 6000 level	Min. 3 credit hours from approved list	3
Life Sciences (7 credits)	BME 5104	Mammalian Physiology	4
	4000 – 6000 level	Min. 3 credit hours from approved list	3
Mathematics (6 credits)	4000 – 6000 level	Min. 6 credit hours	6
Electives (16-30 credits)	4000 Level	Approved by Advisory Committee	Total throughout program ≤ 9
	5000 – 6000 Level	Approved by Advisory Committee	7-30
Clinical Rotation (1 credit)	BME 5XXX	Biomedical Engineering Clinical Rotation	1
Medical Ethics (0 credits)		Responsible Conduct of Science	0
Total Course Requirements:			36-50
Dissertation Research (40-54 credits)	BME 7994	Research & Dissertation	40-54
Total Number of Credit Hours (Courses + Thesis):			90

Degree Requirements for the M.S./D.V.M. and D.V.M./Ph.D. Degrees

The M.S./D.V.M. and the D.V.M./Ph.D. degree requirements will follow those established by the existing M.S./D.V.M. and D.V.M./Ph.D. programs in the VMRCVM. The M.S. and the Ph.D. requirements will be the same as those for the BME M.S. and BME Ph.D. degrees (described above), respectively, with the exception that the life science courses requirements taken for the D.V.M. degree will satisfy those requirements for both the BME M.S. and the BME Ph.D. degrees, as shown in Table 3 and 4, respectively. In addition, the clinical rotation requirements for the D.V.M. degree will satisfy that for the BME Ph.D. program.

Degree Requirements for the M.D./Ph.D. Degree

The M.D./Ph.D. Degree requirements will follow the requirements established by the existing M.D./Ph.D. program at WFUSM. The Ph.D. requirements will be the same as those for the BME Ph.D. degree (described above) with the exception that the life sciences courses and the clinical rotations taken as requirements for the M.D. degree will satisfy those requirements in the BME Ph.D. degree program as shown in Table 4.

Table 3. M.S. Course Requirements for BME M.S./D.V.M. Program

Subject	Course Number	Title	No. Credits Required
Biomedical Engineering (6 credits)	BME 5204	Introduction to Biomedical Engineering	3
	BME 5000 or 6000 level	3 credit hours from approved list	3
Life Sciences	<i>Satisfied with DVM courses</i>		
Electives (11-13 credits)	4000 level	Approved by Advisory Committee	Total throughout program ≤ 6
	5000 or 6000 Level	Approved by Advisory Committee	5-13
Total Course Requirements:			17-19
Thesis Research (11-13 credits)	BME 5994	Research & Thesis	11-13
Total Number of Credit Hours (Courses + Thesis):			30

Table 4. Ph.D. Course Requirements for D.V.M./Ph.D. and M.D./Ph.D. Programs

Subject	Course Number	Title	No. Credits Required
Biomedical Engineering (6 credits)	BME 5XXX	Introduction to Biomedical Engineering	3
	BME 5000 or 6000 level	Min. 3 credit hours from approved list	3
Life Sciences	<i>Satisfied with DVM or MD courses</i>		
Mathematics (6 credits)	4000 – 6000 level	Min. 6 credit hours	6
Electives (16-30 credits)	4000 Level	Approved by Advisory Committee	Total throughout program ≤ 9
	5000 – 6000 Level	Approved by Advisory Committee	7-30
Clinical Rotation	<i>Satisfied with DVM or MD requirements</i>		
Medical Ethics (0 credits)		Responsible Conduct of Science (only if not required by <i>DVM</i> or <i>MD</i> program)	0
Total Course Requirements:			28-42
Dissertation Research (39-54 credits)	BME 7994	Research & Dissertation	48-62
Total Number of Credit Hours (Courses + Thesis):			90

Table 5. List of Approved BME related Courses at VT.

Course	Title
CHE 4984/5984	Skin: Properties, Function, and Bioengineering Applications
ESM 4105-4106	Engineering Analysis Of Physiologic Systems
ESM 4204	Musculoskeletal Biomechanics And Biologic Control
ESM 42XX	Orthopaedic Biomechanics
ESM 4574 (MSE 4574)	Biomaterials
ESM 5305-5306	Biomechanics Of Cardiovascular System
ESM 5405-5406	Clinical Internship In Biomedical Engr.
ISE 5624	Human Physical Capabilities
MSE 5984	Advanced Biomaterials
ME 4984/5984	Impact Biomechanics (course approval proposal in review.)

Table 6. List of Approved BME related Courses at WFU.

Number	Title
MDEG 601	Anatomical Basis for Medical Imaging
MDEG 613	Digital Signal Processing
MDEG 614	Probability and Random Processes
MDEG 703/704	Medical Imaging I/II
MDEG 705	Medical Physics
MDEG 707	Topics in Medical Imaging
MDEG 725	Statistical Pattern Recognition
MDEG 758	Digital Image Processing
MDEG 759	Advanced Image Analysis
MDEG 761/762	Medical Communications/Information Systems
MDEG 781/782	Clinical Rotation
MDEG 792	Topics in Medical Engineering

Table 7. List of Approved Life Sciences Courses at the VMRCVM.

Number	Title
VMS 4054	Laboratory Animal Management
VMS 4074	Pharmacology
VMS 4084, VM 9204	Medical Toxicology
VMS 5074	Molecular Basis Of Inherited Diseases
VMS 5124/VM 8474	Reproductive Pathology
VMS 5144	Oncology Pathology
VMS 5194	Clinical Micropathology
VMS 5214	Pharmacology and Toxicology Testing
VMS 5264/BION 5264	Advanced Medical Biochemistry

VMS 5274	Systems Pathology
VMS 5284	Cellular Pathology
VMS 5314	Membrane Physiology
VMS 5324	General Neurochemistry
VMS 5364	Ultrastructure Meth. In Biological Sciences
VMS 5374	Adv. Nervous Control of Cardiovascular Sys.
VMS 5384	Principles & Methods In Cardiovascular Res.
VMS 5414	Reproductive Cell Biology
VMS 5504	Advanced General Surgery Topics
VMS 5514	Musculoskeletal Surgical Advances
VMS 5544/HNFE 5144	Molecular Aspects Of Nutrition And Diseases
VMS 5564/VM 8534	Introduction To Clinical Research
VMS 5584	Current Topics In CT and MRI
VMS 5714	Biomedical Literature
VMS 6054	Special Studies In Radiology
VMS 6544	Advanced Seminar In Clinical Studies
VMS 6554/VM 8684	Advanced Epidemiology
VMS 6574	Animals And Public Policy (Pending Approval)
VMS 6704/BIOL 6704	Topics In Immunology

Table 8. List of Approved Life Sciences Courses at WFU.

Department/Program	Number	Title
Physics	603	Biophysics
Molecular Genetics	731/732	Molecular Biology
Neurobiology and Anatomy	702	Fundamentals of Neuroscience
Neurobiology and Anatomy	712/713	Introduction to Neuroscience I/II
Neurobiology and Anatomy	705	Microanatomy – Cells and Tissues
Neurobiology and Anatomy	706	Microanatomy – Organ Systems
Neurobiology and Anatomy	701	Cell Biology
Physiology/Pharmacology	731	Cardiac Physiology and Pathophysiology
Physiology/Pharmacology	732	Vascular Physiology and Pathophysiology
Health and Exercise Science	650	Human Physiology
Health and Exercise Science	652	Human Gross Anatomy
Health and Exercise Science	670	Biomechanics of Human Movement
Molecular and Cellular Pathobiology	704	Advanced Topics in Cardiovascular Science

Majors within the program and Required Courses

There are no proposed majors, concentrations, or specialty tracks within the degree programs described above at this time.

Standard 4

(Facilities and Library)

That the institution has adequate space, equipment, instructional materials, and personnel available to it to provide education of good quality. [G.S. 116-15(f)(4)]

Students from North Carolina who are enrolled in the program will have full access to the library at Wake Forest University.

Standard 5

(Faculty and Other Personnel Qualifications)

That the education, experience, and other qualifications of directors, administrators, supervisors, and instructors are such as may reasonably insure that the students will receive, or will be reliably certified to have received, education consistent with the stated objectives of any course or program of study, equivalent experience, or achievement test offered by the institution. [G.S. 116-15(f)(5)]

The Biomedical Engineering program will be delivered by full-time, tenured or tenure-track faculty at Virginia Tech and Wake Forest University.

The following guidelines for appointment of faculty are from the Virginia Tech Faculty Handbook. (Available from the Office of the Provost at <http://www.provost.vt.edu/facultyhandbook/fachandbk.html>)

2.2.2 Assistant Professor

Appointment to the rank of assistant professor carries with it professional responsibilities in teaching, research, extension, public service, or library services. An assistant professor may be assigned responsibility for teaching graduate courses and for supervising master's theses and doctoral dissertations, as well as serving on graduate student committees. The terminal degree appropriate to the field is expected for appointment to this rank.

2.2.3 Associate Professor

In addition to the requirements for assistant professor, a person appointed as associate professor must have demonstrated substantial professional achievements by evidence of an appropriate combination of outstanding teaching, creative scholarship, and recognized performance in extension, public service, library, or related academic and professional service.

2.2.4 Professor

In addition to the requirements for associate professor, appointment to the rank of professor is contingent upon national recognition as an outstanding scholar and educator.

There are approximately 35 faculty members in the College of Engineering at Virginia Tech, in place as of Fall 2002, who are viewed as “core” or “affiliate” faculty

members for the BME program. Twenty-one are core faculty members. They teach BME courses and are most deeply involved on a day-to-day basis with program oversight, curriculum development, and graduate student supervision. Affiliate faculty members may teach BME courses on an occasional basis and they conduct research related to biomedical engineering. They will serve as faculty advisors and supervisors of theses for some BME students, as sources of support for graduate students on their related grants and contracts, and participants in the overall biomedical research and educational program. In addition to the 35+ faculty members in Engineering, there are 18 faculty members in the College of Veterinary Medicine who have related research interests and will be involved as either affiliate faculty members or research collaborators. All participants remain faculty members in their home departments/colleges. Names and academic preparation of all of these faculty members can be provided if needed.

Wake Forest University School of Medicine (WFUSM) has identified 17 core and associate faculty members who will participate in the BME program as course instructors and research mentors. Interviews are underway for two additional appointments as core faculty members.

Faculty responsibilities are defined individually in several forms: (a) the job description used for a faculty search; (b) the faculty appointment terms of offer; (c) annual evaluations to determine merit-based salary adjustments; (d) post-tenure review standards adopted by each department or college in which minimum standards for teaching, research, and service are identified.

Virginia Tech provides three programs of leave of absence with pay to pursue advanced study, scholarly research, or other professional development: 1) educational leave with pay for those without the terminal degree, 2) study-research leave (1/2 salary for full academic year); or 3) research assignment (full pay for one semester). These policies are detailed in the *Faculty Handbook*, section 2.14.

Virginia Tech has made a major commitment as described in the Strategic Self-study report, *Transforming Virginia Tech for the Information Age*, to equipping and training faculty to use computers in their teaching and scholarship. ... The Faculty Development Institute ... is intended to cycle all faculty members through the program every 4-5 years for new equipment and training.

Additional faculty development programs are available through the Center for Excellence in Undergraduate Teaching and the University Writing Program. Individual departments also sponsor speakers, workshops, and special events. The University also provides competitive funding to support women and minority artists and scholars who are invited to campus as part of a lecture series.

Annual faculty activity reports, promotion and tenure guidelines, and departmental minimum standards make clear the expectation that faculty will be involved in continued learning and in the dissemination of research and scholarship through professional meetings and publications. To help foster this, travel funds are provided by the departments and sponsored grants and contracts, and the University provides a "Supplemental Grants Fund" which provides additional travel money for presentations at international conferences.

(from *Affirming Institutional Progress*, SACS accreditation self-study report, p. 4-94)

All faculty appointments and reappointments are documented in the “terms of offer” prepared by the department head, approved according to college procedures, signed by the candidate, and forwarded to Personnel Services. All letters of appointment make reference to further terms and conditions of employment contained in the Faculty Handbook. All new faculty appointments are provisional until approved by the board of visitors. (Faculty Handbook, Section 2.5.2)

The university administration meets the guideline of holding at least the master’s degree. The credentials of the chief executive and academic officers are as follows: President Charles W. Steger, Ph.D. Architecture, Virginia Tech, 1978. Provost Mark G. McNamee, Ph.D. Chemistry, Stanford University, 1973.

Standard 6

(Catalog)

That the institution provides students and other interested persons with a catalog or brochure containing information describing the substance, objectives, and duration of the study, equivalent experience, and achievement testing offered; a schedule of related tuition, fees, and all other necessary charges and expenses; cancellation and refund policies; and such other material facts concerning the institution and the program or course of study, equivalent experience, and achievement testing as are reasonably likely to affect the decision of the student to enroll therein, together with any other disclosures that may be specified by the board; and that such information is provided to prospective students prior to enrollment. [G.S. 116-15(f)(6)]

The graduate catalog is provided to every registered student and is available on the web at <http://www.grads.vt.edu/prospective/graduatecatalog.pdf>. North Carolina students enrolled in the program are served by Wake Forest University; catalog information is available at <http://www.wfubmc.edu/school/OurStudents/index.htm>.

For courses delivered electronically, every course syllabus will provide clear and complete information on the nature of faculty/student interaction, prerequisite technology competencies and skills, technical equipment requirements, and availability of academic support services.

Standard 7

(Program Completion Credentials)

That upon satisfactory completion of study, equivalent experience, or achievement test, the student is given appropriate educational credentials by the institution, indicating that the relevant study, equivalent experience, or achievement testing has been satisfactorily completed by the student. [G.S. 116-15(f)(7)]

The degree programs will be jointly administered between Virginia Tech and Wake Forest University, and consequently the diplomas resulting from the successful

completion of these programs will have signatures and seals from both institutions.

Standard 8

(Student Records)

That records are maintained by the institution adequate to reflect the application of relevant performance or grading standards to each enrolled student. [G.S. 116-15(f)(8)]

Student records will be maintained by the student's home institution through the office of the registrar. If the student has not designated a home institution, Virginia Tech will serve in that role.

Standard 9

(Compliance With Ordinances and Laws)

That the institution is maintained and operated in compliance with all pertinent ordinances and laws, including rules and regulations adopted pursuant thereto, relative to the safety and health of all persons upon the premises of the institution. [G.S. 116-15(f)(9)]

As a state agency, Virginia Tech is maintained and operated in compliance with all ordinances and laws of the Commonwealth of Virginia. Oversight for safety and health regulations is provided by Environmental Health and Safety Services (<http://www.ehss.vt.edu>).

Standard 10

(Finance, Organization, and Student Services)

That the institution is financially sound and capable of fulfilling its commitments to students. [G.S. 116-15(f)(10)]

Virginia Tech produces a financial report each year; the most recent report, 2000-2001, is available upon request to the Office of University Relations.

The university's mission and purpose is printed in the college catalog and available on the web: <http://www.unirel.vt.edu/vt/mission.html>

Virginia Polytechnic Institute and State University is a public land-grant university serving the Commonwealth of Virginia, the nation, and the world community. The discovery and dissemination of new knowledge are central to its mission. Through its focus on teaching and learning, research, and outreach, the university creates, conveys, and applies knowledge to expand personal growth and opportunity, advance social and community development, foster economic competitiveness, and improve the quality of life.

Virginia Tech is governed by a Board of Visitors. As legislated by the Commonwealth of Virginia, the Board of Visitors is appointed by the governor, subject to confirmation by the General Assembly. As public trustees, the members of the Board

have the overall responsibility and authority, subject to constitutional and statutory limitations, for the policy making and continuing operation of the institution. Much of this authority is delegated to the President, who serves as the agent of the Board and chief executive officer of the University. The formulation of basic policies under which the University's operations are carried out, as well as the implementation of these policies, is subject to the Board's review, possible modification, and ultimate approval.

(from *Affirming Institutional Progress*, SACS accreditation self-study report, p. 6-3)

Organizational charts showing lines of authority and relationships among component units, positions, and personnel are maintained and available at <http://www.vt.edu/administration/orgcharts/>

The role of each group comprising the institution (i.e., governing board, administrators, faculty, students) and the nature and extent of the involvement of each group in resolution of issues and determination of the policies is available in the Faculty Handbook, Section 1. (<http://www.provost.vt.edu/facultyhandbook/fh-01.html>)

Student services for North Carolina students will be provided by Wake Forest University.

Standard 11

(Business Practices)

That the institution, through itself or those with whom it may contract, does not engage in promotion, sales, collection, credit, or other practices of any type which are false, deceptive, misleading, or unfair. [G.S. 116-15(f)(11)]

Virginia Tech does not engage in promotion, sales, collection, credit, or other practices of any type which are false, deceptive, misleading, or unfair. Policies are available for review at <http://www.vt.edu/administration/policies/>

Promotional materials are available for review from the Office of Admission or from the website: <http://www.vt.edu>

Standard 12

(Professional Conduct)

That the chief executive officer, trustees, directors, owners, administrators, supervisors, staff, instructors, and employees of the institution have no record of unprofessional conduct or incompetence that would reasonably call into question the overall quality of the institution. [G.S. 116-15(f)(12)]

Credentials for faculty and administrative appointments are published in the catalog. Most members of the Virginia Tech community have information publicly available on websites. Employment records are maintained by department offices. In addition, standards of professional ethics are stated in the Faculty Handbook, section 2.7 (<http://www.provost.vt.edu/facultyhandbook/fh-02.html#2.7>)

Standard 13**(Student Housing)**

That the student housing owned, and maintained, or approved by the institution, if any, is appropriate, safe, and adequate. [G.S. 116-15(f)(13)]

North Carolina students enrolled in this program at Wake Forest University do not have access to campus-owned or maintained housing.

Standard 14**(Cancellation and Refund Policy)**

That the institution has a fair and equitable cancellation and refund policy. [G.S. 116-15(f)(14)]

The cancellation and refund policy is published in the Virginia Tech Graduate Catalog, page 14.

Standard 15**(Institutional Agent)**

That no person or agency with whom the institution contracts has a record of unprofessional conduct or incompetence that would reasonably call into question the overall quality of the institution. [G.S. 116-15(f)(15)]

The Virginia Tech Purchasing Office manages all vendor contracting and monitors compliance with state regulations. Lists of approved vendors are available on the Purchasing website: <http://www.purch.vt.edu>