The University of Virginia takes pride in its continued development of modern engineering education and research. For over one hundred fifty years, the University has offered regular study in engineering, coinciding with the industrial development of the South and paralleling the rise of the engineering profession itself. Today, a total of 9 undergraduate and 31 graduate programs are offered by 8 academic departments.

**Address**

School of Graduate Engineering and Applied Science
A108 Thornton Hall
University of Virginia
P.O. Box 400242
Charlottesville, VA 22904-4242
(434) 924-3897
www.seas.virginia.edu

**History**

The growth of applied science into a learned profession was anticipated in the founding of the University. As early as 1825, the Rector and Visitors formally indicated that instruction in military and civil architecture would be a part of the education program.
Mary, and the AIAA Foundation.

NIA conducts basic, formative, and leading edge research and develops revolutionary new technologies in all areas of interest to NASA through partnerships with the Nation’s universities, industry and other government agencies. NIA performs research in a broad range of disciplines relevant to NASA Aeronautics, Space Exploration, Science and Space Operations missions. Current research focus areas include Adaptive Aircraft Technologies, Rotorcraft Aeromechanics, Aviation Safety, Air Traffic Management, Flight Systems, Cooperative Control Systems, Multifunctional Materials, Nano-materials, Sensor Technology, Systems Engineering and Analysis, Space Exploration Technologies, Planetary Science and Engineering, and Atmospheric Science.

Through NIA’s graduate education program, NIA’s member universities offer M.S. and Ph.D. degrees in fields of engineering and the sciences relevant to NASA. Student research is conducted on-site at Langley Research Center in Hampton, VA. NIA also conducts continuing education, public outreach, and technology transfer programs supported by NASA and other sponsoring organizations.

Degree Programs

The University of Virginia School of Engineering and Applied Science offers programs leading to the degree of Master of Science and Master of Engineering, as well as Master degrees in several areas of applied science, and the Doctor of Philosophy degree. The School’s 10 curricula are: biomedical engineering; chemical engineering; civil engineering; computer engineering; computer science; electrical engineering; engineering physics; materials science and engineering; mechanical and aerospace engineering; and systems engineering.

The range of studies available within the school is designed to satisfy a variety of objectives. Specific courses leading to a degree are not prescribed; instead, each student prepares an individual program, with the help of a faculty advisor, tailored to particular needs and goals and then submits it for faculty approval.

Two types of master’s degrees are available. Strong emphasis is placed on research for the Master of Science (M.S.) degree. The focal point of the M.S. is a thesis describing research accomplished in close cooperation with the student’s faculty advisor. The degrees of Master of Engineering (M.E.) and Master of Applied Science are professionally oriented and do not require a thesis.

The Doctor of Philosophy degree is regarded by many as a symbol that its bearer has achieved an in-depth understanding of a segment of human knowledge and has contributed significantly to that knowledge. The Ph.D. requires a program of advanced study in courses and research, satisfactory completion of Ph.D. examinations, and submission of a dissertation based on independent, original research.

Admission Requirements

The School of Engineering and Applied Science offers an exceptional educational opportunity for qualified students who seek an environment where graduate study is characterized by integrated learning experiences with highly qualified, experienced,
and dedicated faculty. Graduate admissions committees are seeking well-rounded individuals who bring exceptional intellectual capabilities along with a passion for their chosen field. The admissions process looks for evidence of competitive academic performance, work and life experiences, and qualities of character such as motivation, maturity, tenacity, integrity, ability to work with others, self-reliance, and leadership. All applicants are considered without regard to race, color, religion, sex, national origin, political affiliation, disability, age, sexual orientation, or veteran status. The Engineering School welcomes applications from men and women from other countries whose diverse perspectives broaden the range of educational experience for all members of the academic community.

An applicant must have a baccalaureate degree from a recognized college or university. While this degree will normally be in the field of engineering or applied science, degrees in other fields may be acceptable. Undergraduate courses that may be required to remedy deficiencies must be taken without credit. An applicant should have a B average for admission into graduate studies.

Each candidate must complete the Application for Admission. The application requires completion of an essay, complete transcripts of all academic work and three letters of recommendation. A non-refundable application fee must accompany the application; an application will not be considered if the fee has not been paid. All applicants are required to take the Graduate Records Exam (GRE) general exam. International students must have an excellent command of the English language in order to enroll at the University. The TOEFL exam is required of all applicants if the language first learned and spoken in the home is not English. Most students admitted score at least 600 on the paper format of the test, 250 on the computer-based test or 100 on the Internet-based test. Scores from the International English Language Test (IELTS) may be submitted in lieu of the TOEFL. Most successful applicants score in the 7.0 band or better on the IELTS. Some students may be required to complete the Summer English for Academic Purposes Program (www.virginia.edu/provost/caelc/summer.html) prior to admission.

Applications may be completed and submitted on-line (https://applyonline.virginia.edu/engineering) or application materials may be downloaded from the same site and submitted by mail to: Graduate Studies, Office of the Dean, School of Engineering and Applied Science, Thornton Hall, Room A-108, 351 McCormick Road, P.O. Box 400242 Charlottesville, VA 22904-4242. On-line applications are strongly encouraged. Application information, including recommendations, reach the admissions committees much faster if submitted electronically.

All students who wish to be nominated for assistantships and fellowships should submit a complete application by January 15 for September admission. For U.S. citizens and permanent residents, deadlines for complete applications for admission are: December 1 for January admission, May 1 for June admission, and August 1 for September admission. International students on visas (other than permanent residents) must apply at least five months prior to the term for which admission is sought to allow time for the International Student Office to review and process necessary papers. A prospective international student must have appropriate, current, valid, and legal non-immigrant status before he/she can be offered final admission to the University. Also, all international students (other than permanent residents) must provide evidence of financial capability for the duration of their studies.

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Financial Assistance

The School of Engineering and Applied Science offers financial aid to graduate students through fellowships and assistantships. Students must be nominated by their
department to be considered for a fellowship or assistantship. Most superior students can expect to receive aid of some kind throughout their graduate careers.

Students receiving financial aid from the School of Engineering and Applied Science must be registered as full-time students, defined as at least 12 credits of lecture-laboratory courses and/or research during the academic year, must maintain a grade point average of 3.0 and must also maintain satisfactory progress toward a degree. Graduate research assistants must register for a minimum of 6 credits of research during the summer term. Students receiving financial aid are not permitted to have other employment without approval of the Office of Assistant Dean for Graduate Programs. Students are awarded financial assistance to enable them to devote maximum effort to graduate studies.

Fellowships

Fellowships are intended to allow graduate students to devote full time to learning opportunities in the classroom and laboratory. No work duties, in a pay for service sense, are required, but good academic progress, including research for the thesis or dissertation, is essential. Some programs, during fellowship support, will include research and teaching duties as part of the usual academic requirements for the degree.

Graduate Research Assistantships Graduate Research Assistants are assigned to work with a faculty member on a specific research project which should culminate in a project report, thesis, or dissertation. Full-time graduate research assistants may not carry a load of more than 9 credits of lecture-laboratory courses but must register each semester for enough additional credits of teaching/research to maintain full-time student status.

Graduate Teaching Assistantships Graduate Teaching Assistants are assigned to assist a faculty member teaching a specific lecture/laboratory course. The assigned duties will depend on the course and instructor. Graduate teaching assistants may not carry a load of more than 9 credits of lecture-laboratory courses but must register each semester for enough teaching/research credit to maintain full-time student status.

Special Fellowships

The ARCS Fellowship was established in 1984 as an annual gift from the Metropolitan Washington, D.C. Chapter of the Achievement Rewards for College Scientists Foundation. The recipients are chosen from enrolled students nominated by the departments.

L. William Ballard, Jr., Fellowship is offered to a graduate student who has demonstrated academic excellence, leadership qualities, and financial need.

Carlos and Esther Farrar Fellowship provides fellowships to deserving students at the University of Virginia studying in disciplines and programs pertaining to scientific investigation of the universe (i.e., aerospace engineering, astrophysics, mathematics). This fellowship is awarded on the basis of scholastic merit and financial need.

John H. and Dorothy W. Sidebottom Fellowship is offered to graduate students majoring in aerospace engineering.

GEM Fellowships The University of Virginia is a member of the National Consortium for Graduate Degrees for Minorities in Engineering, Inc. While attending one of the member universities for graduate study leading to a master’s degree in engineering, a
minority student accepted into the GEM program receives a stipend plus an allowance for tuition and fees. The School of Engineering and Applied Science supplements the stipend to equal, at a minimum, the total of the fellowships normally awarded to entering students. Application material can be obtained by contacting Executive Director, GEM, Box 537, Notre Dame, IN 46556, (219) 239-7183.

The Dean’s Fellows Award was established in 1984 to recognize outstanding entering graduate students. This award provides a stipend of $2,000 per year for up to three years, in addition to the financial aid offered by the departments.

General Requirements

Grades The letter grade symbols used for grading graduate students in the School of Engineering and Applied Science are: A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F. To obtain a graduate degree in the School of Engineering and Applied Science, an individual must have a minimum cumulative grade point average of 3.0 on all graded graduate course work taken at the University of Virginia while a graduate student, and graduate courses taken as an undergraduate at the University of Virginia if the courses are listed on a program of studies and are used to satisfy requirements for a graduate degree. No grade lower than a C is acceptable toward meeting the requirements for a graduate degree. If a course is repeated, both grades are used in computing the overall grade average. Undergraduate courses and courses taken on a Credit/No Credit basis may not be used to meet requirements for a graduate degree and are not used in computing the grade average. A 10-day period past the end of the semester (end of the examination period) is automatically allowed to remove an incomplete. A maximum extension to the end of the subsequent semester (the following fall for a spring class and spring for a fall class) may be granted upon special request to the dean’s office.

Quality of Work Graduate degrees are not conferred merely upon the basis of the number of courses passed, nor the length of time spent in residence or in research, but primarily on the basis of the quality and scope of the candidate’s knowledge and power of investigation in a chosen field of study. Unsatisfactory work during any semester or an overall grade average of less than B may be considered sufficient reason for withdrawal of financial assistance, or for enforced withdrawal from the graduate program. Graduate students are considered to be on probation if their cumulative grade point average for graduate work is less than 3.0 and they are notified of this by the dean’s office. Graduate students are subject to dismissal if their cumulative grade point average is not raised to 3.0 within one semester.

Research All graduate students conducting research must register for the appropriate research course. Credits are assigned to this course in such a way that the total number of credits for which the student is registered reflects the fraction of time devoted to progress toward a degree. Students must register for a minimum of six credits of research for the Master of Science (thesis) degree and 24 credits of research for the Ph.D. degree. In many cases, research in excess of these minimum requirements, particularly for the Ph.D. degree, is desirable. Project research for the Master of Engineering or Master of Applied Science (non-thesis) degrees is encouraged and, in some curricula, required.

Time Limit For Graduate Degrees The student must complete all the requirements for a Master of Science degree within five years after admission to the graduate program, and he or she must complete all requirements for a Master of Engineering degree within seven years after admission to the graduate program. All requirements for the Doctor of Philosophy degree must be completed within seven years after admission to the doctoral program. Expired credits may be revalidated with approval from the advisor, the appropriate department graduate committee or department.
chair, graduate studies committee, and the Office of the Dean.

**Residency** M.S. and Ph.D. degree programs require a period of residency. A full-time graduate student in residence at the University, whether taking courses or doing research, is expected to be fully engaged in the academic community, to participate in planned and impromptu discussions with faculty, graduate students and undergraduate students, and to actively contribute to intellectual discourse within the School. During the period of residency, a student should have no major conflicts of commitment. Substantial employment obligations, for example, would generally be in conflict with the residency requirement.

**Right to Petition** In certain cases there may be extenuating circumstances that cause a deviation from the requirements for the master’s or doctoral degrees. A student has the right to petition the Graduate Studies Committee requesting such a deviation from the normal requirements. This petition should be in writing and endorsed by both the student’s advisor and department chair.

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**Transfer Credit**

The Graduate School of Engineering and Applied Science grants transfer credit based on an analysis of the content, level and comparability of the course taken, the applicability of the courses to the student’s intended degree program, the quality of the student’s performance in the course, and the institution at which the work was completed. Transfer credit, as described below, will be considered for acceptance toward a degree in the Graduate School of Engineering and Applied Science.

**Master of Science Candidates** may include a maximum of six credits of graduate course transfer credit on their program of study at the University of Virginia. They cannot have been used to satisfy requirements for another degree, and only courses with a grade of B or better may be transferred. All requests for the inclusion of transfer credit in the University of Virginia program of study are subject to the approval of the candidate’s academic department and the Office of the Dean for Graduate Programs.

**Master of Engineering Candidates** may include a maximum of 12 credits of graduate course transfer credit in their program of study at the University of Virginia. They cannot have been used to satisfy requirements for another degree, and only courses with a grade of B or better may be transferred. All requests for the inclusion of transfer credit in the University of Virginia program of study are subject to the approval of the candidate’s academic department and the Office of the Dean.

**Doctor of Philosophy Candidates** transfer of courses must be submitted for approval in the program of study.

**Air Force and Army ROTC**

Graduate students in the School of Engineering and Applied Science are eligible to participate in the Air Force and Army ROTC programs. Inquiries concerning enrollment in the Air Force ROTC should be addressed to the Unit Admissions Officer in the Astronomy Building (434-924-6833). Inquiries concerning enrollment in the Army ROTC should be addressed to the Professor of Military Science, Room B-030, New Cabell Hall. Air and Military Science courses are described in the *Undergraduate Record*. 
Master of Science

The Master of Science degree is a graduate research degree that introduces students to research at the graduate level. A full-time student may be able to complete the program in one and one-half calendar years. The School of Engineering and Applied Science offers instruction leading to degrees in biomedical engineering, chemical engineering, civil engineering, computer engineering, computer science, electrical engineering, engineering physics, materials science and engineering, mechanical and aerospace engineering, and systems engineering.

The department chair appoints an advisor to each graduate student for consultation in preparing a program of study. This program should be approved by the advisor and the department chair, and submitted for approval to the Office of the Dean by the end of the first semester of graduate study. Graduate credit is not automatically granted for courses completed before the program of study is approved. Any later change in the program of study must be submitted for approval. Approval of a program of study does not obligate the University to offer the courses listed, as all graduate courses are offered subject to sufficient enrollment. Candidates who complete the degree requirements and are approved by the faculty are presented for degrees at the University’s first scheduled graduation exercise following completion of the requirements.

**Degree Requirements** A candidate for the Master of Science degree must:

1. complete an approved program of study that includes a minimum of 24 graduate-level credits, with at least 12 credits taken in the area of major study. This program may contain no more than a total of nine credits of 500-level courses, and no more than six of those credits may be taken within the department conferring the degree. Classes at the 400-level or below do not count toward the Masters degree. Departmental requirements may be more restrictive. The program may include a maximum of six transfer credits for graduate courses completed at another school of recognized standing; however, those courses must be part of the approved program of study at the University. Only courses with a grade of B or better may be transferred;
2. complete acceptable research, accomplished under the close direction of a faculty advisor. The research is documented in a written thesis. Written instructions for thesis preparation are available in the Office of the Dean;
3. perform satisfactorily in a final examination of the thesis conducted by an examining committee appointed by the Office of the Dean. Depending on the policy of the individual department, at least one examiner may be from outside the applicant’s major department. A candidate who does not perform satisfactorily on the examination may, with the recommendation of two-thirds of the examining committee, be granted a further examination after being given adequate time to prepare;
4. submit the approved thesis. Three copies of the final thesis, as approved by the examining committee, must be submitted for binding by the date specified on the academic calendar;
5. apply for the degree, using a standard form, by the date specified on the academic calendar;
6. complete at least one semester in residence at the University of Virginia as a full-time student; and
7. complete a comprehensive examination (if required by the student’s department).

Master of Engineering

The Master of Engineering degree is a graduate professional degree. It enhances the professional instruction of the bachelor’s program in engineering or applied science, providing greater knowledge and deeper understanding in a specific field. A full-time program
student should be able to complete the degree program in one calendar year. The School of Engineering and Applied Science offers instruction leading to the degree of Master of Engineering in biomedical engineering; chemical engineering; civil engineering; computer engineering, electrical engineering; mechanical and aerospace engineering; and systems engineering.

The degrees of Master of Computer Science, Master of Engineering Physics, and Master of Materials Science and Engineering are also offered.

The department chair appoints an advisor to each graduate student for consultation in preparing a program of study. This program must be approved by the advisor and the department chair and submitted to the Office of the Dean for approval by the end of the first semester of graduate study.

**Degree Requirements:** A candidate for the Master of Engineering, Computer Science, Engineering Physics, or Materials Science and Engineering must:

1. complete an approved program that includes a minimum of 30 graduate-level credits, with at least 18 credits taken in the area of major study. This program may contain no more than nine credits of 500-level courses; no more than six of those credits may be taken within the department conferring the degree. Classes at the 400-level or below do not count toward the Masters degree. Departmental requirements may be more restrictive. The program may include a maximum of 12 transfer credits for graduate courses completed at another school of recognized standing; however, those courses must be part of the approved program of study at the University. Only courses with a grade of B or better may be transferred;
2. apply for the degree, using a standard form, by the date specified in the academic calendar; and
3. complete a comprehensive exam (if required by the student’s department).

**Part-time Graduate Students**

Those students who wish to pursue a graduate degree in the School of Engineering and Applied Science on a part-time basis must be approved for admission to the degree program by the department or program offering the degree, and they must meet all admission requirements for full-time degree students. Part-time students taking on-Grounds courses for degree credit, except those taking courses through the Commonwealth Graduate Engineering Program (CGEP), must register through the School of Engineering and Applied Science, not through the School of Continuing and Professional Studies. A maximum of six credits of graduate course work taken on-Grounds through continuing and professional studies prior to admission to a graduate degree program may be accepted as credit toward degree requirements.

**Accelerated Master’s Degree in Systems Engineering**

The Accelerated Master’s Degree in Systems Engineering is designed to enable working professionals to become systems thinkers and problem solvers through a unique blend of formal education integrated with personal work experience. Responding to the needs of industry and individuals alike, this one-year Accelerated Master’s Program enables professionals to earn their degrees without career interruption.

The program’s focus is on information proficiency, systems thinking and decision analytics. The curriculum introduces and explores systems methodologies through real-world case studies firmly focused on problem-solving using both analytical and theoretical modeling approaches throughout.

Taught by full-time faculty of the Department of Systems and Information Engineering
and the Darden Graduate School of Business Administration, the program format includes one full week in residence in late May, twenty weekends (Fridays and Saturdays) throughout the year, and a final week in residence during the following April. Tuition covers courses, books, software, lodging and meals.

The program has four core courses: Introduction to Systems Engineering (SYS 601), Systems Integration (SYS 602), Enterprise Analysis and Modeling (SYS 603) and Probabilistic Modeling (SYS 605). Additional elective courses include data analysis and forecasting, risk analysis and modeling, information systems architecture and decision analysis among others. Prerequisites include a bachelor's degree from an college or university of recognized standing, calculus (2 semesters), probability and statistics (calculus-based), linear algebra (or equivalent) and computer programming. Applicants must take the GRE general exam.

Commonwealth Graduate Engineering Program (CGEP)

In addition to the resident Master of Engineering degree program conducted on the Grounds of the University of Virginia, the School of Engineering and Applied Science offers the following six degrees through the Commonwealth Graduate Engineering Program: Master of Engineering in Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical and Aerospace Engineering, and Systems Engineering; Master of Engineering Physics, and Master of Materials Science and Engineering.

Regular graduate courses are taught via videoconferencing throughout the Commonwealth and to selected out-of-state locations. This two-way video/two-way audio capability provides professors and students on-Grounds the ability to communicate with off-Grounds students at remote classroom sites. Serving as off-Grounds receive sites are Virginia Polytechnic Institute and State University, George Mason University, Virginia Commonwealth University, Old Dominion University, Mary Washington College, and Shenandoah University, as well as the Centers for Higher Education in Roanoke, Lynchburg, Northern Virginia, Hampton Roads, Abingdon, and Halifax/South Boston. Additionally, certain companies and government agencies have established classrooms at their locations and participate in this graduate engineering program.

Each of the six departments in this program has an appointed advisor who consults with students on curriculum and any special circumstances that might arise with participating working professionals. Students' programs of study must be approved by their advisors and the associated department chairs and be submitted to the Office of the Dean.

Degree requirements are the same as mentioned in the previous Master of Engineering section, except that an additional three transfer credits from Virginia Commonwealth University, George Mason University, Old Dominion University, or Virginia Polytechnic Institute and State University may be included in the candidate's program of study.

Graduate courses with grades of C or better taken for graduate credit at participating institutions may be transferred toward meeting the requirement of the Master of Engineering degree.

All graduate courses taken for degree credit through the Commonwealth Graduate Engineering Program, including transfer courses from the participating institutions, are included in the student’s grade point average.

M.E. – M.B.A. Joint Degree Program
The objective of the joint M.E.-M.B.A. degree program is the development of leaders with business administration skills and solid technical expertise. The M.E. degree provides a foundation in engineering or applied science well above the normal undergraduate level. The M.B.A. develops the functional areas of business by teaching the essential behavioral and quantitative sciences that apply to management, as well as the techniques of management decision making. The combined degrees provide the knowledge required for a wide range of business applications.

A student must be admitted to both degree programs and satisfy nearly all of the requirements for both degrees. Typically, the overall program length is reduced by one semester compared to the total time for attaining both degrees separately.

In order to obtain this reduction in the number of credits, the student cannot stop after one degree but must finish both degrees. If the student decides to drop out of the joint degree program, the full requirements of one of the degree programs must be met.

Students in the M.E.-M.B.A. Joint Degree Program are required to complete 24 credits for the Master of Engineering degree in SEAS and 69 credits for the Master of Business Administration degree in the Darden Graduate School of Business Administration. Of the 24 credits in SEAS, 21 credits will be normal course work and 3 credits will be a project course taken in an appropriately numbered course. A minimum of 12 credits of course work must be taken in the major department, with a maximum of 6 credits at the 500 level. None of the 24 credits may include a course taken in the Darden School. The project must have one advisor from SEAS and another from the Darden School.

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Doctor of Philosophy

The School of Engineering and Applied Science offers instruction leading to the degree of Doctor of Philosophy in Biomedical Engineering; Chemical Engineering; Civil Engineering; Computer Engineering; Computer Science; Electrical Engineering; Engineering Physics; Materials Science and Engineering; Mechanical and Aerospace Engineering; and Systems Engineering.

An advisory committee for each doctoral student is appointed by the Office of the Dean upon recommendation of the chair of the student's department or curriculum area. At least one member of the advisory committee is from outside the student's department and major curriculum study area. The committee meets with the student as soon as possible to assist in planning a detailed program of study and research. The committee recommends a program of formal courses, discusses research objectives and research plans with the student, and advises the student on the areas in which he or she must take Ph.D. examinations. The committee meets with the student as needed to review progress and, if necessary, to assist the student in revising the program of study.

Degree Requirements The degree of Doctor of Philosophy is conferred by the School of Engineering and Applied Science primarily in recognition of breadth of scholarship, depth of research, and ability to investigate problems independently. A candidate for the Doctor of Philosophy degree must:

1. complete at least three sessions (or the equivalent) of graduate study after the baccalaureate degree, or two sessions (or the equivalent) after the master's degree. At least one session beyond the master's degree must be in full residence at the University of Virginia in Charlottesville. For students who enter a Ph.D. program without a master’s degree, at least 1.5 sessions (3 semesters, not including summer sessions) must be spent in full residence at the University
of Virginia in Charlottesville. For the purpose of satisfying these requirements, two regular semesters (not including summer sessions) will be considered as one session;

2. satisfactorily complete an approved program of study. Each program is tailored to the individual student in accordance with the departmental requirements approved by SEAS faculty. The program must include a combined minimum of 72 credits of research and graduate level course work beyond the baccalaureate. The program must also include a minimum of 24 credits of formal course work, with no more than nine of those credits from 500-level courses. No more than six credits at the 500-level may be earned within the department granting the degree. Classes at the 400-level or below do not count toward the Ph.D. degree. Departmental requirements may be more restrictive. Transfer of course credit from other schools of recognized standing may be included in the program of study; however, only courses with a grade of B or better may be transferred. The student must submit the program for approval first to the department faculty and then to the Office of the Dean within one semester after the Ph.D. exam;

3. perform satisfactorily on the departmental Ph.D. examination. The objective of the examination is to determine whether the student has assimilated and is able to integrate a body of advanced knowledge;

4. submit a dissertation based on independent, original research that makes a significant contribution to the student's field of study. In preparation for conducting research and writing the dissertation, students must prepare a written dissertation proposal. This proposal describes the current state of the art with bibliography, outlines the proposed method of investigation, and discusses the anticipated results. The student then makes a public, oral presentation of the proposal to the advisory committee, with all members of the faculty invited to attend. After the presentation, the student submits the written dissertation proposal for approval to the department faculty (or its designated committee) and the Office of the Dean;

5. be admitted to candidacy for the degree: a student must have satisfactorily completed the Ph.D. examination and have received approval for the dissertation proposal before being admitted to candidacy. Admission to candidacy must be completed at least one semester before the degree is awarded;

6. satisfactorily present and defend the dissertation in a public forum. The dissertation defense is conducted orally and publicly by a committee appointed by the Office of the Dean; this committee must include the candidate's advisory committee. The defense is held after the candidate has submitted the dissertation to the committee, and it is designed to test the student's knowledge of a field of research. Candidates who are accepted by the examining committee and approved by the faculty are presented for degrees at the first scheduled graduation exercises of the University following completion of the requirements;

7. apply for a degree on the standard form by the date specified in the academic calendar;

8. submit three copies of the approved final dissertation to the Office of the Dean by the date specified in the academic calendar.

National Institute of Aerospace

The University of Maryland, Virginia Tech, North Carolina State University, North Carolina A&T State University, Georgia Tech, and the University of Virginia are participating in a cooperative program of graduate engineering and applied science education and research centered in the Tidewater area of Virginia. This effort focuses upon research and education opportunities found at the NASA Langley Research Center. It is intended to allow students to pursue M.S. and Ph.D. degrees based upon research conducted at the NASA Langley facility. Students in the NIA program must be U.S. citizens, enroll in the graduate program of one of the six participating schools
(their "home institution"), reside in the Hampton Roads area, and work on a research project at NASA Langley under the guidance of a faculty member at their home institution. Using distance learning technology, students in the NIA program are able to take graduate classes from the six participating schools (the "NIA universities"). A student’s program of study may include 50 percent transfer courses provided that those courses are taught by faculty of the NIA universities. Upon successful completion of the program, a student receives a degree from her or his home institution. Other M.S. and Ph.D. degree requirements are the same as mentioned in the Master of Science and Doctor of Philosophy sections, with the exception that residency in Charlottesville is not required.