

# Mining & Minerals Engineering Graduate Student Manual

A supplement to the  
*Graduate Policies & Procedures and Course Catalog*  
published by the Graduate School  
Virginia Polytechnic Institute and State University

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*Rules and regulations in this document  
apply to students beginning their graduate studies  
after Fall 2011 or later*

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## NOTICE TO GRADUATE STUDENTS

This document supplements the Graduate Policies and Procedures and Course Catalog (available from the Graduate School). Every graduate student should have his or her own copy of this document and should read it carefully. If the answer to a question cannot be obtained from the Graduate Policies and Procedures and Course Catalog or this manual, the answer should be sought by asking their major professor, the Chair of the Mining and Minerals Engineering Graduate Committee, the Department Head of Mining and Minerals Engineering, or the Graduate School, preferably in that order. The intention of this manual is to provide graduate students information which will be helpful in their graduate studies. This document is not intended to be legally binding.

The policies and procedures contained in and referred to in this document are subject to the graduate student appeals process as described in the university's Graduate Policies and Procedures and Course Catalog. Additional information on graduate study at Virginia Tech can be found on the Internet ([www.vt.edu](http://www.vt.edu)). Information about the Mining and Minerals Engineering Department can be found at its website ([www.mining.vt.edu](http://www.mining.vt.edu)). General information on graduate study can be found at Virginia Tech's Graduate School website ([www.grads.vt.edu](http://www.grads.vt.edu)).

### **Graduate Committee:**

Dr. Gerald Luttrell, Chair

Dr. E. Westman, Member

Dr. Emily Sarver, Member

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*Virginia Tech does not discriminate against employees, students, or applicants on the basis of race, color, sex, sexual orientation, disability, age, veteran status, national origin, religion, or political affiliation. The university is subject to title VI and VII of the Civil Rights Act of 1994, Title IX of the Education Amendments of 1972, Section 503 and 504 of the Rehabilitation Act of 1973, the Age Discrimination in Employment Act, the Vietnam Era Veteran Readjustment Assistance Act of 1974, Federal Executive Order 11246, Governor Warner's State Executive Order Number Two, and all other rules and regulation that are applicable. Anyone having questions concerning any of those regulations should contact the Equal Opportunity / Affirmative Action Office.*

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## 1.0 INTRODUCTION

The Department of Mining & Minerals Engineering at Virginia Tech offers Master of Science (M.S.), Master of Engineering (M. Eng.) and Doctor of Philosophy (Ph.D.) degrees in mining and minerals engineering. These degrees that are designed to educate students for rewarding careers in industry, academia, and government. Graduate research may be pursued in several areas of specialization including rock mechanics, ground control, equipment evaluation, systems analysis, health and safety, mineral and coal processing, applied surface and colloid chemistry, conservation and the environment, mining ventilation, mine electrical systems, computer applications, and mineral economics. One or more of the topics may be emphasized within the department at a given time based on the ongoing research activity of the eight full-time research faculty members assigned to the department. Graduate students accepted to the program are generally provided financial support through sponsored grants, teaching assistantships or graduate fellowships. The graduate program also recognizes the specific needs of industry professionals with a program that strives to (i) upgrade technological skills of practicing engineers, (ii) encourage the pursuit of doctoral-level work, and (iii) provide an opportunity for advanced education and career reorientation. A major goal of the department is to afford all graduate students with the opportunity to participate in creative and challenging research projects, which typically lead to scholarly publications in international journals and conference proceedings.

The graduate program in the Department of Mining and Minerals Engineering (MinE) is administered by the Department Head and a three-member Graduate Committee. Student records and various approval forms are maintained by the department and are available on the department website ([www.mining.vt.edu/Academics/graduate](http://www.mining.vt.edu/Academics/graduate)). The MinE Graduate Committee is responsible for selecting students for admission, for overseeing the program curriculum, and for setting program policies and standards. The Department Head appoints members to the Graduate Committee and approves all petitions to the Graduate School based upon the recommendations of the Graduate committee. Current department administrators are:

Department Head:	Greg Adel ( <a href="mailto:adel@vt.edu">adel@vt.edu</a> )
Graduate Committee Chair:	Gerald Luttrell ( <a href="mailto:luttrell@vt.edu">luttrell@vt.edu</a> )
Graduate Coordinator:	Kathryn Dew ( <a href="mailto:dewk@vt.edu">dewk@vt.edu</a> )

## 2.0 ADMISSIONS

### 2.1 Deadlines

Admission to graduate study in the Department of Mining and Minerals Engineering is granted by the Graduate School after a recommendation of the Department Head upon consultation with the Departmental Graduate Committee. The following table lists the admission deadlines set by the Virginia Tech Graduate School.

<i>Application and Departmental Decision Deadlines</i>				
Deadline	Fall	Spring	Summer I	Summer II
Application:				
Domestic	July 1	December 1	April 15	June 1
International	April 1	September 1	January 1	February 1
Department Decision:				
Domestic	July 15	December 15	May 1	June 15
International	May 15	October 15	February 15	March 15

Applications received after the deadline will be considered on a case by case basis. Students seeking assistantships for Fall semester funding should normally submit all required admissions materials by January 15 for full consideration.

### 2.2 GRE Requirements

The Graduate Record Exam (GRE) is required for all foreign national applicants. The GRE is also recommended for domestic applicants who do not have an undergraduate or M.S. degree from Virginia Tech.

### 2.2 TOEFL Requirements

International students whose first language is not English, or who do not hold a baccalaureate degree from an English language university, are also required to submit the results of the Test of English as a Foreign Language (TOEFL). Minimum scores for admission are set by the Virginia Tech Graduate School ([www.grads.vt.edu](http://www.grads.vt.edu)). International students are required to undergo a process of certification of competence in English. International students who are native English speakers are exempt. Students who did not graduate from an English language university are required to take an English Placement Test administered by the Graduate School. This test must be taken at the beginning of a student's first semester of enrollment. Students who demonstrate a need for remedial instruction will be required to enroll in a special English course immediately. Such study is counted as a regular part of a student's course load. Successful completion of the course constitutes certification.

### 2.2 Types of Admission

The student may be admitted to departmental graduate studies into one of the following categories:

### *2.2.1 Regular Status*

Regular status admission to a graduate degree is open to an applicant whose grade point average (GPA) meets or exceeds the 3.00 required by the Graduate School for the last half of the credits earned for the undergraduate (bachelors) degree and whose academic background meets the requirements of the department. A graduate degree, or at least 12 credits of graduate coursework taken post-baccalaureate, while in graduate status, can be used to supersede the undergraduate record in evaluating credentials for admission. Students not having an adequate background in mining engineering will be expected to take make-up courses in areas of their deficiencies. Recommendations for such background courses are to be made by the Department Graduate Committee to the student's Graduate Advisor.

### *2.2.2 Provisional Status (M.S. Only)*

Provisional status admission to the M.S. program is open to an applicant whose GPA is below the 3.00 required by the Graduate School, but generally not lower than 2.75, who has other experience or qualifications that demonstrate potential to undertake graduate study and whose admission is requested by the admitting academic unit. After attempting 12 graduate credits and earning at least a 3.00 GPA, a student is changed to Regular status by the Graduate School. If a 3.00 GPA is not earned in the first 12 credit hours attempted, the department will consult with the Graduate School to determine whether the student should be allowed to continue for one additional semester on probationary status. Appropriate coursework taken while on Provisional status may be included on the Plan of Study for the student's graduate degree at the discretion of the student's Advisory Committee. International students are not eligible for consideration for admission as provisional students.

### *2.2.3 Conditional Status*

An applicant whose academic background is deficient in some aspect, but who otherwise meets minimum GPA qualifications for admission (Regular or Provisional) may be granted conditional admission to the department. The conditions of admission will be specified by letter to the applicant and to the Graduate School prior to applicant matriculation. The department notifies the Graduate School when the conditions have been met. This classification is normally only available to applicants who have acquired some maturity and appropriate professional experience since completing their undergraduate degree. None of these credits earned under conditional status may be used toward a graduate degree. These courses only serve to qualify for admission to Graduate School. Conditional status is allowed for no more than the equivalent of two semesters. Students admitted in this status are not eligible for financial assistance.

### *2.2.4 Non-Degree Status*

Non-degree status is open to an applicant who qualifies for admission to the Graduate School in Regular status, but who does not wish to, or cannot be, listed as a degree candidate for one of the following reasons: (a) does not currently desire to work toward a graduate degree; (b) desires to transfer the credits for use toward a graduate degree at another institution; or (c) there

currently is no higher degree available at the university other than the one the applicant currently holds in the department or field of study. Official transcripts of the undergraduate degree are required for admission to this status. Per university policy, the department places no limits on the total number of credits that may be taken while in non-degree status. Credits earned by students in non-degree status may be used in meeting degree requirements, if they are appropriate for inclusion, in the Plan of Study if the student is later admitted to a graduate degree. Graduate students in non-degree status are not eligible for graduate assistantships. International Exchange Students in J1 status only may hold non-degree status for up to two semesters (note that TOEFL score requirements do apply).

### *2.2.5 Commonwealth Campus Status*

Commonwealth Campus status is open to an applicant who holds an earned bachelors or higher degree from a regionally accredited U.S. university. Examples of students who seek admission into the Commonwealth Campus program include those who (a) may qualify for regular admission but do not currently wish to work for a graduate degree; (b) do not qualify for admission because of a poor undergraduate record and wish to improve their credentials; (c) need to update their academic credentials after several years of professional experience or (d) require graduate courses for professional certification. International students in F1 or J1 visa status are not eligible for Commonwealth Campus status. However, some other types of visa status may allow non-degree enrollment (note that TOEFL score requirements do apply). Students applying for Commonwealth Campus status must complete the Application for Admission and submit a transcript (unofficial is sufficient) or a copy of their diploma for the highest degree attained. Students in Commonwealth Campus status are not eligible for graduate assistantships.

Commonwealth Campus students are limited to 12 credits of course work while in this status. Students may not earn a graduate degree while enrolled in Commonwealth Campus status. If a Commonwealth Campus student wishes to enter a degree program, the Application for Admission to that degree needs to be filed early in the semester prior to the desired semester for degree entry. If the student is accepted to a degree, a determination of the applicability of any courses taken while in Commonwealth Campus status, to a graduate degree, will be made at the time of submission of the Plan of Study for the degree.

### *2.2.6 Graduate Certificate Status*

A qualified student who wishes to enter Virginia Tech to obtain a graduate certificate, without being enrolled in a degree program, may apply for graduate admission to Graduate Certificate status. Such applicants should submit concurrently an Application for Admission and a Graduate Certificate Application available from the Graduate School ([www.grads.vt.edu](http://www.grads.vt.edu)). The Graduate School requires a GPA of 3.0 for admission to Certificate Status and official transcripts must be submitted. Note that students pursuing a degree and a certificate simultaneously are classified in their degree program. Credits used toward a certificate may be used in meeting degree requirements if they are appropriate for inclusion on the Plan of Study for the degree.

### *2.2.7 Visiting Graduate Student Status*

A graduate student in good standing at another university may be permitted to take graduate courses by submitting a Visiting Graduate Student Application form, available at the Graduate School website ([www.grads.vt.edu](http://www.grads.vt.edu)). Enrollment as a visiting graduate student is limited to one calendar year or 18 credit hours.

### *2.2.8 Internal Ph.D. Applications*

Internal applicants (i.e., those persons who have completed the master's program in the Department of Mining and Minerals Engineering at Virginia Tech) wishing to change admission from M.S. to Ph.D. should submit the following to the department Graduate Coordinator:

- The Graduate School's Request for Change of Admission Status form.
- A letter from the student's major professor supporting the application, endorsed by the members of the student's advisory committee.
- An up-to-date transcript of the student's grades in the master's program at Virginia Tech.

Once this information has been received, the Department Graduate Committee will evaluate the application and forward a recommendation to the department head. Students will be notified by the Graduate School of the department's action.

### *2.2.9 Faculty/Staff Eligibility*

Teaching and research faculty of the rank of assistant professor or above cannot be considered candidates for degree or be awarded graduate degrees from Virginia Tech. The Provost's Office may be requested to waive this policy for an individual following successful appeal to the Commission on Faculty Affairs. Staff and administrative/professional faculty may become candidates for graduate degrees with approval from the department, the university employer, and the graduate school. To receive approval, candidates must address conflicts of interest, time, and commitment. Supervisors of these candidates should abstain from chairing and/or serving on the candidates' graduate committees to avoid potential conflicts of interest.

## **2.3 Graduate Coursework for Undergraduates**

### *2.3.1 Seniors*

Students in their senior year, with a 3.0 or better GPA, may enroll in 5000-level courses satisfying undergraduate degree requirements within the department with the permission of the course instructor and the Department Head. However, should the student become a graduate student, these courses may not be used on the Plan of Study for a graduate degree.

### *2.3.2 Dual Student Status*

Seniors in a bachelor's degree, who have a GPA of 3.0 or better, may be eligible for Dual Status during the final semester of their undergraduate degree. To obtain this status, students must file an application for the master's degree and the Concurrent Undergraduate and Graduate Status Form (for obtaining Dual Status). The department reviews the student for master's

acceptance and, if this is recommended, indicates on the Admission Analysis form that the student will be accepted for Dual Status for the final semester of the undergraduate degree. However, this acceptance must occur prior to the final semester of the undergraduate degree. Graduate coursework taken during the semester of dual registration may only be designated for use in the graduate degree when it is not used to meet bachelor's degree requirements (i.e., each course taken during the final semester is specified as being for either the bachelor's or the master's degree).

### *2.3.3 Accelerated Undergraduate/Graduate Degree Programs*

Qualifying undergraduate students may be admitted to the departmental Accelerated Undergraduate/Graduate Degree Program in accordance with the new CGS&P policy. Consistent with Graduate School policy, all such students must meet or exceed the following the minimum requirements and regulations:

- Students must be accepted into the program prior to the beginning of the semester in which they would enroll in courses to be used on the accelerated program.
- Students qualifying for the program must be in the last 12 months of their undergraduate degree.
- A maximum of 12 credits of graded coursework may be used in the program.
- No more than 6 of the double-counted credits may be at the 4000 level; all others must be offered for graduate credit.
- A grade of B or higher must be earned in each course to be double counted.
- Courses must not be taken pass-fail if a graded option is available.

## **2.4 Financial Support**

Graduate appointments with financial support are referred to as graduate assistantships. Graduate assistantships are generally provided for M.S. and Ph.D. candidates (but not usually for M.Eng. students). A graduate assistantship also includes a tuition waiver. Upon accepting financial aid as a graduate assistant, a student normally is expected to perform assigned duties (e.g., research work, teaching, grading, etc.) for a minimum period of one academic year. Students on an assistantship are required to work a minimum of 20 hours per week. Each student will be evaluated continuously by the faculty member supervising his or her work. If the student's work performance is not satisfactory, his or her financial support may be discontinued. In addition, the student must maintain a QCA of 3.00 or better in all courses taken as a graduate student irrespective of whether or not the courses are listed on the Plan of Study. Financial support for summer school is handled on an individual basis. Financial support may be extended on a yearly basis, within the guidelines of the Graduate School, upon mutual agreement of the student, the project director, and the department head.

There are three categories of graduate student appointments with financial support:

- Graduate Assistant (GA): GAs are supported by university funds.
- Graduate Teaching Assistant (GTA): GTAs are supported by university funds and help support the teaching activities of the department.

- Graduate Research Assistant (GRA): GRAs are supported by funds from a faculty member's research program.

The amount of each assistantship can vary with the extent to which the graduate student has completed degree requirements. Work periods for GAs and GTAs are normally based on the academic year (August 16 through May 15). Funding and work periods for GRAs are normally based on a calendar year.

## **2.5 Non-Traditional Applicants**

### *2.5.1 Preparatory Course Requirements*

Graduate applicants with non-engineering degrees should be prepared to take preparatory courses that are not counted for graduate credit. At a minimum, these applicants are required to take 15 hours of undergraduate courses offered within the Department of Mining and Minerals Engineering. The preparatory courses must include:

- MINE 2504: Introduction to Mining Engineering

AND at least one of the following:

- MINE 3504: Rock Mechanics and Ground Control
- MINE 3524: Excavation Engineering
- MINE 3534: Mineral Processing
- MINE 3584: Ventilation Engineering
- MINE 4544: Mine Reclamation and Environmental Management

All remaining preparatory courses must be selected from the following list of approved departmental courses based on recommendations from the student's graduate committee.

- MINE 2524: Elements of Mine Design
- MINE 3504: Rock Mechanics and Ground Control
- MINE 3524: Excavation Engineering
- MINE 3534: Mineral Processing
- MINE 3554: Resource Recovery
- MINE 3564: Underground Mine Design
- MINE 3574: Surface Mine and Quarry Design
- MINE 3584: Ventilation Engineering
- MINE 4504: Materials Handling and Power Systems
- MINE 4514: Health, Safety and Risk Management
- MINE 4524: Project Engineering and Mine Management
- MINE 4544: Mine Reclamation and Environmental Management

Graduate applicants should consult the undergraduate and graduate catalog to determine prerequisites for any courses specified. While graduates may be exempt from internal course prerequisites based on prior education, knowledge or experience, graduates are still responsible for the content of material covered in the prerequisite courses. Graduates without sufficient mathematics and engineering background are highly encouraged to consider taking these supporting courses prior to attempting courses with prerequisites.

### *2.5.2 Preparatory Course Tracks*

To ensure adequate depth and breadth in a specific graduate program area, it is highly recommended that non-traditional applicants select preparatory courses in one of four tracks listed below. Track selection should be made in consultation with the student's graduate advisor.

#### Track A (Mine Design)

- MINE 2504: Introduction to Mining Engineering
- MINE 2524: Elements of Mine Design
- MINE 3504: Rock Mechanics and Ground Control
- MINE 3564: Underground Mine Design
- MINE 3574: Surface Mine and Quarry Design

#### Track B (Ventilation)

- MINE 2504: Introduction to Mining Engineering
- MINE 2524: Elements of Mine Design
- MINE 3564: Underground Mine Design
- MINE 3584: Ventilation Engineering
- MINE 4514: Health, Safety and Risk Management

#### Track C (Processing)

- MINE 2504: Introduction to Mining Engineering
- MINE 3534: Mineral Processing
- MINE 3554: Resource Recovery
- MINE 4504: Materials Handling and Power Systems
- MINE 4544: Mine Reclamation and Environmental Management

#### Track D (Environmental)

- MINE 2504: Introduction to Mining Engineering
- MINE 3534: Mineral Processing
- MINE 3574: Surface Mine and Quarry Design
- MINE 4514: Health, Safety and Risk Management
- MINE 4544: Mine Reclamation and Environmental Management

## **3.0 DEGREE REQUIREMENTS**

### **3.1 Student Responsibilities**

All students are expected to be knowledgeable of and to comply with all university and departmental graduate regulations as stated in this document and official publications such as the *Graduate Policies and Procedures* and *Course Catalog*.

### **3.2 Advisor and Advisory Committee**

#### *3.2.1 Graduate Advisor*

A student's Graduate Advisor (major professor or committee chair) provides guidance in completing a Plan of Study and in conducting the design or thesis/dissertation project required of each graduate candidate. Before registration for the second semester of study, each graduate student must confer with members of the faculty and obtain an agreement with one to serve as the student's advisor. The student is expected to take the initiative in selecting his or her major professor. The Department Head will appoint a temporary advisor during the first semester of study for those students who have not made prior arrangements.

#### *3.2.2 Advisory Committee Members*

The function of the student's Graduate Advisory Committee is to approve the Plan of Study, provide advice and periodically assess progress. The M.S. or Ph.D. student and his or her advisor jointly select the other members of the advisory committee, and the student is responsible for obtaining from those chosen their agreement to serve. An advisory committee should be selected during the first semester of study.

The advisory committee for an M.S. candidate consists of a minimum of three faculty members, with not less than two from the Department of Mining and Minerals Engineering. The advisory committee for a Ph.D. candidate consists of a minimum of four faculty members with a doctoral degree, with not less than three from the Department of Mining & Minerals Engineering. Advisory committee members should hold an academic degree at least equivalent to the degree being sought by the student. A committee member who does not satisfy this qualification but has substantial and significant expertise in the research topic of the student may be invited to serve on an advisory committee; however, approval by the Graduate School must be sought in such cases. It is the department's expectation that all members serving on an advisory committee actively participate in advising the student and in directing the research program.

A non-thesis (M.Eng.) student usually has only one advisor during his or her period of study. The final examination is administered by an examining committee appointed by the Department Head.

The M.S. or Ph.D. student and his or her advisor are responsible for arranging meetings of the advisory committee at appropriate times. It is strongly recommended that advisory committees meet when the student is starting his or her research to discuss the undertaking and

again when the student and the advisor feel that the research has been completed and the student is ready to begin writing the thesis. Each student should arrange a meeting with his or her advisory committee at least once per semester. The graduate seminar given by the students may serve this purpose, and therefore, should be attended by all members of the advisory committee. Each student should meet with his or her major professor at least once per month to discuss the status of his or her graduate program; failure to meet with the major professor during the semester may result in receiving no credit for thesis or dissertation hours.

### **3.3 Plan of Study**

#### *3.3.1 Plan of Study Requirements*

All graduate students must submit an approved Plan of Study. The program must meet the minimum requirements for the particular degree being sought and must be approved by the student's Graduate Advisory Committee, the Chair of the Graduate Committee, the Department Head, and the Graduate School. All courses on the Plan of Study, including supporting courses, must be taken on a letter grade (A/F) basis except for those courses approved to be graded on a pass-fail (P/F) basis only. Audit courses cannot be included on the Plan of Study.

For M.S. candidates, the Plan of Study is due by the end of the second academic semester (based on full time enrollment of 12 credits per semester). For B.S./M.S. students, the Plan of Study is due by the end of the first full semester of graduate study. The Plan of Study for Ph.D. candidates is due by the end of the third academic semester (based on full time enrollment).

#### *3.3.2 Requesting a Plan of Study*

Students should obtain an electronic Plan of Study template from the Graduate Committee Chair. Course and research listings should be entered only after consultation with his or her advisor and advisory committee. Once the form is completed, it should be submitted to the Graduate Committee Chair for review prior to obtaining signatures of the Graduate Advisor and Graduate Advisory Committee members. After this initial review and approval, the Plan of Study should be submitted to the Graduate Coordinator so that it can be entered and submitted to the Graduate School for final approval.

#### *3.3.3 Changes to Plan of Study*

A change in the Plan of Study is necessary whenever the student's course of study deviates from the original program approved by the Graduate Advisory Committee. Plan of Study Change forms are available at the Graduate School website ([www.grads.vt.edu](http://www.grads.vt.edu)). A change in the Plan of Study is also required to change members of the student's Graduate Advisory Committee. The Change of Committee form is also available from the Graduate School website ([www.grads.vt.edu](http://www.grads.vt.edu)).

#### *3.3.4 Repeating Courses*

Once a course on the Plan of Study has been taken for a grade, it must remain on the Plan of Study. However, students are required to repeat any courses on the Plan of Study in which a grade below "C-" has been earned. Courses may not be repeated if a "P" grade or a grade of "C" or better is earned. After a course has been repeated, the grade for the first enrollment will be Repeat Graduate (RG, defined as a 'C-' or lower; RP, defined as a grade of C or higher when the course was first taken). Only the most recent enrollment in the course will receive a letter grade and be calculated in the GPA.

### *3.3.5 Transfer Courses*

No more than 50% of the graded credit hours needed to satisfy the requirements for a graduate degree may be transferred in from a regionally accredited university. All such credits must have earned grades of "B" or better, have been earned while in good standing in graduate status, and must have been graduate courses (numbered 5000 or higher) at the institution where the student took the courses. Grades of "S" or "P" are not acceptable for transfer credit. All transfer courses must be acceptable to the student's Graduate Advisory Committee and the Graduate Committee Chair or Department Head. To facilitate the approval process, students should attach a statement containing the syllabus and description of the courses they wish to transfer, the name of the textbooks used (copies of textbooks if possible), and the numbers and catalog descriptions of the Virginia Tech courses which most nearly match the courses they wish to transfer.

For transfer course work more than five years old, a Justification of Old Course Work form must be filed with the Plan of Study. Academic work, including transfer credit more than five years old at the time the Plan of Study is submitted, requires written justification for inclusion on the plan. As such, the form requires an Advisory Committee explanation of how the committee will insure that the student will update their knowledge for out-of-date courses. The Course Justification Request form and procedural guidelines are available at the Graduate School website ([www.grads.vt.edu](http://www.grads.vt.edu)). Justifications remain valid throughout the degree unless the student is out of enrollment for a period exceeding one calendar year. Justification of "old" course work and review of the Plan of Study occurs at the time of re-admission.

Credits from other universities are transferred to a Virginia Tech graduate degree at the time the Plan of Study that includes those courses is approved by the Graduate School. Transferred courses count only as credit hours and are not included in the calculation of the Virginia Tech GPA. Official transcripts are required before transfer course work can be approved for the Plan of Study. Research, Project and Report, Practicum or Internship credit hours may not be transferred in from another university to meet Virginia Tech graduate degree requirements (i.e., they cannot be included on the Plan of Study). Credits taken while in undergraduate status or for an undergraduate degree cannot be used as transfer credit for a graduate degree. Courses double counted for both degrees for Accelerated Undergraduate/Graduate Degree Program students are transferred from the bachelor's degree onto the master's Plan of Study, so the rules for transfer courses apply.

### *3.3.6 Supporting Courses*

Supporting courses are those the student's Graduate Advisory Committee considers necessary to provide missing background for taking the key courses required for the student's degree program. Courses numbered lower than 4000 can only be used on the Plan of Study as Supporting Courses. All courses listed on the Plan of Study, including Supporting Courses are requirements for the degree and must be completed with a grade of "C-" or better. However, supporting courses do not count toward the minimum number of credit hours required for the degree.

### **3.4 Credit Hour Requirements**

#### *3.4.1 Thesis (M.S.) Degree*

The student's Plan of Study for a M.S. degree must meet the minimum total credit requirements of 30 credit hours and minimum graded credits of 20 credit hours. A minimum of 6 credit hours of Master's Research (5994) must be taken at Virginia Tech. The degree must include the preparation of a written thesis that involves original research/scholarship. Graded credits must be taken for an A/F grade unless the course is only offered pass-fail (P/F). The credits may include a maximum of 6 credits of Virginia Tech 4000-level undergraduate course work. The 6 credits of Virginia Tech 4000-level course work may include Special Study (4984) courses but may not include Undergraduate Independent Study (4974) or Undergraduate Research (4994) courses. All other graded course work must be 5000 level or higher (i.e., graduate course work). The 5000-level course work may include a maximum of 6 credits total in 5974, 5984, and 6984 courses and 3 credits of Graduate Seminar (MinE 5944). All graduate students, both part-time and full-time, are required to register for and to attend the seminar during each semester in residence on the campus. Each student is required to present a seminar on his or her topic of research in order to satisfy the seminar enrollment requirement.

#### *3.4.2 Non-Thesis (M.Eng.) Degree*

The student's Plan of Study for a M. Eng. degree must meet the minimum total credit requirements of 30 credit hours and minimum graded credits of 24 credit hours. The total may include a maximum of 6 credits of Project and Report (5904) credits taken at Virginia Tech. The total may include a maximum of 6 credits of Virginia Tech 4000-level undergraduate course work. The 6 credits of Virginia Tech 4000-level course work may include Special Study (4984) courses, but may not include Undergraduate Independent Study (4974) or Undergraduate Research (4994) courses. All other graded course work must be 5000 level or higher (i.e., graduate course work). The 5000-level course work may include a maximum of 6 credits total in 5974, 5984, and 6984 courses and 3 credits of seminar.

#### *3.4.3 Doctoral (Ph.D.) Degree*

Doctoral degrees at Virginia Tech must meet the minimum semester credit hour requirements of 90 hours for total credit hours and 30 credits for graded credits. A minimum of 30 credit hours of Doctoral Research (7994) is required. The degree must include the preparation of a written dissertation that involves original research/scholarship. Graded course work on the Plan of Study must be taken for an A/F grade unless the course is only offered P/F. At least 27

graded credits must be at the 5000 level or higher (i.e., graduate course work). The Plan of Study may include a maximum of 6 credits of Virginia Tech graded 4000-level undergraduate course work. The 6 credits of Virginia Tech 4000 level course work may include Special Study (4984) courses but may not include Undergraduate Independent Study (4974) or Undergraduate Research (4994) courses. The 5000-level course work may include a maximum 18 credits total in 5974, 5984, and 6984 courses and 4 credits of Graduate Seminar (MinE 5944). All graduate students, both part-time and full-time, are required to register for and to attend the seminar during each semester in residence on the campus. Each student is required to present a seminar on his or her topic of research in order to satisfy the seminar enrollment requirement.

In accordance with the definition of doctoral degrees as involving mastery of intellectual principles, development of original scholarly contributions to the chosen field or fields, and critical evaluation of issues and problems in relevant disciplines, residency is required for all doctoral students at Virginia Tech. Residency for doctoral degree programs (PhD) can be accomplished via two consecutive semesters of full-time enrollment. Students completing residency via full-time enrollment should understand residency goals and plan not only to complete required courses, but also to sustain scholarly engagement and immersion in research, scholarship and professional development. All doctoral students should indicate the mechanisms by which they plan to earn residency on the Plan of Study form. Should a change in residency plan be required, students can seek approval of such change via the Plan of Study Change form accompanied by relevant documentation.

### **3.5 Transfer of Credits**

Graduate courses taken at other institutions can be included in the Program of Study under the conditions described in the Graduate Policies and Procedures and Course Catalog. To facilitate the approval process, students should attach a statement containing the syllabus and description of the courses they wish to transfer, the name of the textbooks used (copies of textbooks if possible), and the numbers and catalog descriptions of the Virginia Tech courses which most nearly match the courses they wish to transfer.

### **3.7 Time Limits**

Coursework more than five years old at the time of submission of the Plan of Study must be revalidated to count toward the Master's or Ph.D. degree. Coursework on the Plan of Study must be completed within five years after approval of the plan of study or revalidated to count towards the Master's degree. Coursework on the Plan of Study must be completed within seven years after approval of the plan of study or revalidated in the preliminary examination for the Ph.D. has not been completed by then.

### **3.8 Academic Eligibility**

The university requires that candidates for graduate degrees maintain a 3.00 quality credit average (QCA) computed over all courses taken for graduate credit. A student who fails to maintain a 3.00 will be placed on departmental probation. Students must raise their average above 3.00 during the next academic semester to be removed from probation. Failure to regain

regular status is grounds for dismissal. Failure to maintain a 2.0 average during any single semester is also grounds for dismissal. Transfer courses are not used in the computation of university or departmental QCA.

### **3.9 Registration**

Registration for classes can occur up to the deadline specified on the university calendar. Pre-registration is strongly encouraged during the preceding semester since the MinE department generally cancels under-enrolled courses based upon pre-registration numbers. All graduate students who are supported by GRA, GTA or GA, whether continuing or new, are required to register for a minimum of 15 credits per semester, if working toward a degree which requires either a thesis or dissertation. The required credits may consist of any combination of course credits and variable credit course (5904, 5974, 5984, 5994, or 7994) credits.

## **4.0 DISSERTATION, THESIS AND REPORT**

### **4.1 General Requirements**

#### *4.1.1 Thesis and Dissertation (M.S./Ph.D.)*

The Department of Mining and Minerals Engineering requires submission of a thesis (M.S.) or a dissertation (Ph.D.) which consists of a written report of the student's research. Requirements for thesis or dissertation preparation are specified in the Graduate School's Policies and Procedures. The candidate must deliver one final copy of the thesis to each member of the examining committee at least two weeks before the date of the final examination.

#### *4.1.2 Project Report (M. Eng.)*

A report on an engineering project undertaken by the student must be prepared and submitted to the Graduate School. Editorial standards and graduate school requirements are the same as those for theses. The report must be approved by the student's advisor and the examining committee set up by the department head at the request of the major professor. Copies of the project report must be submitted to members of the examining committee at least two weeks before the scheduled time of the final examination.

### **4.2 Examination Procedures**

#### *4.2.1 M.S. and M.Eng. Final Examinations*

Each M.S. candidate will take an oral final examination covering not only the thesis, but also the student's general preparation in mining and minerals engineering. The final examination must be scheduled through the Graduate School. The Graduate School requires a minimum of two weeks advance notice to schedule theses examinations. Final examination forms are available at the Graduate School website ([www.grads.vt.edu](http://www.grads.vt.edu)). At the final examination, the

candidate will be asked to make a short presentation to the examining committee, describing the important aspects and results of the research. About the first half of the examination will be devoted to examining the thesis. The second half of the examination will be more general in nature, and draw from the student's background, including coursework. To aid the faculty in preparing for this part of the examination, it is recommended that the candidate furnish each member of the examining committee with a copy of the approved Plan of Study.

Non-thesis (M. Eng.) candidates will take a final oral examination similar to that taken by an M.S. candidate, except that the first part of the examination will center on the Project and Report instead of a thesis. In addition, a report on an engineering project undertaken by the student must be prepared and submitted to the Graduate School. Editorial standards and graduate school requirements are the same as those for theses. The report must be approved by the student's advisor and the examining committee set up by the department head at the request of the major professor. Copies of the project report must be submitted to members of the examining committee at least one week before the scheduled time of the final examination.

The candidate's presentation is open to all members of Virginia Tech's academic community. However, after the completion of the presentation, attendance by individuals who are not faculty members of professorial rank must have approval of the examining committee. Candidates will be questioned by members of the examining committee and by those faculty members who are invited to participate. The examining committee consists of the three or more members of the student's advisory committee (in the case of the M.S.). On the basis of the candidate's performance in the examination, the examining committee will determine whether the student has passed or failed.

A majority vote of the examining committee is required for a pass. In this event, the committee may, at its discretion, require minor thesis revisions and/or inform the candidate of areas of weakness revealed by the examination. If the advisory committee decides that the candidate has failed the examination, the committee shall determine:

- If the candidate may re-take the examination,
- When the examination may be repeated (normally the following semester), and
- If necessary, project/thesis revisions, and additional research and/or course work.

#### *4.2.2 Ph.D. Qualifying Examination*

Qualifying examinations may be used to evaluate the student's mastery of the subject of mining and minerals engineering, to determine deficiencies, and to formulate judgments on whether the student should be encouraged to pursue doctoral studies. The examination is non-mandatory and given based on a written recommendation to the Department Graduate Committee by the student's Advisory Chair. To take the qualifying examination, the student and the student's advisor must verify in writing to the department that (i) the student has a properly formulated committee and an approved program of study and (ii) the student has completed at least one and one-half years of study beyond the B.S. degree. The student's advisor is responsible for checking the student's eligibility. If requested, the candidate would normally complete the examination by the end of his/her first year of Ph.D. studies.

When requested by the Graduate Advisor, the Ph.D. qualifying examination is conducted by the Department Graduate Committee. At this time, the committee, with the assistance of the advisor, will prepare appropriate questions for the examination and will submit a copy to the Department Graduate Committee. The qualifying examination will be a written open-book format typically covering two four-hour sessions: one session each on two consecutive days. After completing the examination, the student's Graduate Chair and the Department Graduate Committee will meet as a whole to decide the minimum grade for passing the examination. The possible outcome of each exam is pass, conditional pass, or fail. Students who conditionally pass are required to make up their deficiencies by enrolling in courses identified by their Graduate Advisory Committee. Students who fail are permitted one chance to retake the exam the following semester. If they do not pass this second attempt, they will not be allowed to continue with their doctoral studies.

#### *4.2.3 Ph.D. Preliminary Examination*

The preliminary examination is a requirement for all doctoral students. This examination must be taken at least six months before the final examination. At least 24 hours of course work and/or research must remain to be taken, including work for which the student is currently enrolled. For the preliminary examination, the candidate is required (i) to orally present a detailed proposal for his/her dissertation research and (ii) to submit to the student's Graduate Advisory Committee a written literature review on his/her general research topic. This requirement must be completed at least six months prior to the Ph.D. final examination (dissertation defense). The written portions must be completed and distributed to the Graduate Advisory Committee members at least two weeks in advance of the oral presentation. Since the purpose of the preliminary examination is to determine if the student is prepared to undertake the proposed research, the majority of questioning will focus on the material contained in the proposal although the format of the examination can be modified at the discretion of the student's Advisory Chair.

The preliminary examination must be scheduled through the Graduate School. The Graduate School requires a minimum of two weeks advance notice to schedule these examinations. Preliminary examination forms are available at the Graduate School website ([www.grads.vt.edu](http://www.grads.vt.edu)). At the same time, the student schedules the preliminary examination with the Graduate School, the student should deliver to the Department Graduate Coordinator a copy of the scheduling request, a short abstract of the student's proposed research, and a short biography. This information will be used to prepare a preliminary examination announcement, which will be distributed to the departmental faculty.

The advisory committee determines if a student passes or fails the preliminary examination. The resulting outcome can be pass, conditional pass, or fail. Two negative votes are required for a fail decision. If a student fails, he/she is permitted a second attempt, which must occur during the following semester. The conditions on the conditional pass are decided by the advisory committee, and a written record of the conditions must be included in the student file. Certification of completing the conditions must be made prior to scheduling the final oral examination. This exam is announced in advance, and all professorial rank faculty members are

invited to attend. In addition, it is the option of the major professor and advisory committee to invite graduate students or others to attend a portion or all of the preliminary examination; however, approval by the Graduate School must be sought in all such cases. Examinations may only be scheduled during regular academic sessions.

#### 4.2.4 *Ph.D. Final Examination*

The Ph.D. final examination must be scheduled through the Graduate School. The Graduate School requires a minimum of two weeks advance notice to schedule these examinations. Final examination forms are available at the Graduate School website ([www.grads.vt.edu](http://www.grads.vt.edu)). The final examination for Ph.D. candidates is centered on the defense of the dissertation. This exam is advertised in advance. The candidate's presentation is open to all members of Virginia Tech's academic community. However, after the completion of the presentation, attendance by others, except faculty members of professorial rank, must be approved by the examining committee. Examinations may only be scheduled during regular academic sessions.

On the basis of the final examination, the quality of the dissertation, and the candidate's overall academic record, the examining committee will make a recommendation as to the acceptance of the dissertation and the awarding of the Ph.D. degree. The committee shall either pass or fail the candidate. A pass requires a majority of approval votes from the committee members. In the event of a passing decision, the committee shall indicate any minor revisions which may be required in the dissertation. In the event of a failure, the committee shall recommend (i) if and when another examination shall be permitted (normally the following semester) and (ii) additional research and major revisions of the dissertation. The student is allowed no more than two opportunities to pass the final examination.

## **5.0 SATISFACTORY PROGRESS**

### **5.1 Degree Benchmarks**

#### 5.1.1 M.Eng. Degree Benchmarks

The following indicate typical times required to reach important benchmarks of the non-thesis (M.Eng.) graduate degree. All times are reported in reference to the time since official admission to the department graduate program.

0-6 months	Select thesis advisor, advisory committee
0-12 months	Submit Plan of Study
12-18 months	Submit Project Report

The following indicate typical times required to reach important benchmarks of the thesis (M.S.) graduate degree. All times are reported in reference to the time since official admission to the department graduate program.

0-6 months	Select thesis advisor, advisory committee
0-12 months	Submit Plan of Study
12-24 months	Defend thesis

The following indicate typical times required to reach important benchmarks of the doctoral (Ph.D.) graduate degree. All times are reported in reference to the time since official admission to the department graduate program.

0-6 months	Select dissertation advisor, advisory committee
0-6 months	Submit Plan of Study
0-12 months	Pass Qualifying Exam (If required by Advisory Chair)
12-24 months	Pass Preliminary Exam
36-48 months	Defend dissertation

## 5.2 Performance Evaluations

Every year at the beginning of April, the student should ask his or her advisor to complete the Graduate Student Progress Evaluation Form, which is available from the Department Graduate Committee Chair or Departmental Graduate Coordinator. The student should be given the opportunity to read, review and respond to the advisor's evaluations. Negative reviews should be fully documented. In the case of an irreconcilable disagreement between the student and the advisor, the matter should be resolved by the Department Graduate Committee.

## 6.0 FORMS

### 6.1 Plan of Study

#### 6.1.1 *Plan of Study Form*

This electronic form (spreadsheet) identifies the student's graduate advisory committee and lists the courses the student has taken, or plans to take, to fulfill the requirements for his or her particular degree. It should be obtained from the Graduate Committee Chair, filled out by the student, and then reviewed by the Graduate Committee Chair. Once reviewed, a hardcopy of the document should be signed by the student's advisory committee and returned to the Department Graduate Coordinator. A copy will be made for the student's file, and the original will be forwarded to the graduate school.

Link: (See Graduate Committee Chair)

#### 6.1.2 *Plan of Study Change Form*

This form is used to make course changes on a student's Plan of Study. The form is available from the Graduate School.

Link: [www.grads.vt.edu/forms/academics/Chg\\_Plan.pdf](http://www.grads.vt.edu/forms/academics/Chg_Plan.pdf)

### *6.1.3 Change of Committee/Advisor Form*

This form is used to change advisors or committee members on a student's Plan of Study. The form is available from the Graduate School.

Link: [www.grads.vt.edu/forms/academics/Chg\\_Committee.pdf](http://www.grads.vt.edu/forms/academics/Chg_Committee.pdf)

## **6.2 Examination Forms**

### *6.2.1 Request to Admit Candidate to Preliminary Examination*

This form is used to obtain a committee signature card for the exam, and it is used by Ph.D. candidates to notify the graduate school of the place and time of a student's preliminary exam. The form is available from the Graduate School.

Link: [www.grads.vt.edu/forms/academics/Sched\\_Prelim.pdf](http://www.grads.vt.edu/forms/academics/Sched_Prelim.pdf)

### *6.2.2 Certification of Defending Student Status*

This form is used to avoid paying a semester of tuition when the thesis defense will be completed no later than 20 days after the first day of class. The form is available from the Graduate School.

Link: [www.grads.vt.edu/forms/academics/Cert\\_of\\_Defending\\_Status.pdf](http://www.grads.vt.edu/forms/academics/Cert_of_Defending_Status.pdf)

### *6.2.3 Request to Admit Candidate to the Final Examination*

This form is used by M.Eng., M.S. and Ph.D. candidates to notify the graduate school of the place and time of a student's final examination and to obtain a committee signature card for the exam. The form is available from the Graduate School website.

Link: [www.grads.vt.edu/forms/academics/Sched\\_Final.pdf](http://www.grads.vt.edu/forms/academics/Sched_Final.pdf)

## **6.3 Miscellaneous Forms**

### *6.3.1 Independent Study Request Form*

This approval form is required to enroll in an independent study course. The form is available from the Mining & Minerals Engineering department website.

Link: [www.mining.vt.edu/Academics/graduate](http://www.mining.vt.edu/Academics/graduate).

### *6.3.2 Request for Leave of Absence*

This form is used when studies are interrupted for a semester or more. The form is available from the Graduate School website.

Link: [www.grads.vt.edu/forms/academics/Req\\_Lv\\_of\\_Absence.pdf](http://www.grads.vt.edu/forms/academics/Req_Lv_of_Absence.pdf)

Additional forms dealing with tuition, fees, graduation and other important graduate student concerns can also be obtained at the Graduate School website.

Link: [www.grads.vt.edu/forms/index.html](http://www.grads.vt.edu/forms/index.html)

## 7.0 FACULTY

The faculty of the Department of Mining and Minerals Engineering are widely recognized for their expertise and pioneering. A low student-to-faculty ratio ensures that our students receive individual mentorship and top-notch academic and career advising. A listing of the current faculty is provided below.

### **Adel, Gregory T.**

Professor, Assistant Head

[adel@vt.edu](mailto:adel@vt.edu)

Department Faculty Member since 1982

B.S., South Dakota School of Mines and Technology, 1978

M.S., South Dakota School of Mines and Technology, 1979

D. Eng., California, Berkeley, 1982

Modeling and simulation of mineral processing/coal preparation operations; process control and sensor development for mineral processing/coal preparation plants; optical and video-based sensing technology; image analysis characterization of minerals, coal, soils, and waste; liberation analysis and complex particle behavior in grinding and flotation circuits; fundamentals of comminution.

### **Karfakis, Mario G.**

Associate Professor

[mario@vt.edu](mailto:mario@vt.edu)

Department Faculty Member since 1988

B.S., Université Scientifique et Médical de Grenoble, Institut Dolomieu, France, 1975

M.S., University of Wisconsin, Madison, 1978

Ph.D., University of Wisconsin, Madison, 1983

Geomechanics; rock fracture mechanics; rock fragmentation; characterization of geomaterials; ground control; environmental impact of excavation and construction in rock; abandoned coal mine problem mitigation; design and operation of surface mining systems.

**Karmis, Michael E.**

Stonie Barker Professor

mkarmis@vt.edu

Department Faculty Member since 1978

B.S., Strathclyde, 1971

Ph.D., Strathclyde, 1974

Rock mechanics and ground control; design of surface and underground mining excavations; mining systems engineering; surface subsidence due to underground mining; engineering and environmental aspects of mineral resources development.

**Luttrell, Gerald H.**

Massey Professor

luttrell@vt.edu

Department Faculty Member since 1986

B.S., Virginia Tech, 1980

M.S., Virginia Tech, 1982

Ph.D., Virginia Tech, 1986

Process engineering, including simulation and modeling, process control, and circuit analysis; coal preparation, including equipment design, advanced coal cleaning, and column flotation; mineral processing, including fine particle processing, flotation hydrodynamics, flotation cell/column design; environmental remediation, including soil treatment and volume reduction of radioactive soils.

**Luxbacher, Kramer**

Assistant Professor

luxbacher@vt.edu

Department Faculty Member since 2008

B.S., Virginia Tech, 2002

M.S., Virginia Tech, 2005

Ph.D., Virginia Tech, 2008

Eng. Ed. Certificate, Virginia Tech, 2008

Mining ventilation, mine degassing and coal-bed methane production, health and safety effects of noise.

**Sarver, Emily**

Assistant Professor

esarver@vt.edu

Department Faculty Member since 2011

B.S., Virginia Tech, 2004

M.S., Virginia Tech, 2005

Ph.D., Virginia Tech, 2010

Pedogogy Certificate, Virginia Tech, 2011

Impacts of mining on the environment; sustainable development; extractive metallurgy; corrosion.

**Westman, Erik**

Associate Professor

ewestman@vt.edu

Department Faculty Member since 1999

B.S., Colorado School of Mines, 1986

M.S., University of Colorado, 1994

Ph.D., VPI & SU, 1999

Geomechanics; geophysical methods; numerical modeling of rock behavior; reserve estimation; mine design software; geographic information systems; monitoring systems

**Yoon, Roe-Hoan**

Nicholas T. Camicia Professor

ryoon@vt.edu

Department Faculty Member since 1978

B.S., Seoul National University, 1967

M.S., McGill University, 1971

Ph.D., McGill University, 1977

Mineral processing, coal preparation, surface chemistry, colloid chemistry, and electrochemistry, centering on the separation of fine particulate materials; development of new separation methods by control of surface chemistry and hydrodynamics; hydrophobic interactions, direct surface force measurement, coagulation and dispersion; dewatering of fine particles; triboelectrostatic separation; recycling of secondary material.

## APPENDIX

Students submitting a thesis or dissertation must do so electronically. Complete instructions are located on the Electronic Thesis and Dissertation (ETD) website, <http://etd.vt.edu>. This form is required to initiate the review and approval by the Graduate School. This is the final step leading to review of your record for degree conferral.

FOR OFFICE USE ONLY

PERSONAL INFO

LAST/FAMILY NAME	FIRST/GIVEN NAME	MIDDLE NAME	SUFFIX
<b>Student ID Number:</b> _____			
<b>Date of Birth:</b> _____ month/day/year			
<b>E-mail Address:</b> _____ @vt.edu account, preferred			
<b>Daytime Phone:</b> _____ <input type="checkbox"/> Home <input type="checkbox"/> Office <input type="checkbox"/> Mobile			
<b>Local Address</b> _____ _____ _____			
city	state	zip	country
<b>Date of Defense:</b> _____			
<b>Document Title:</b> _____			
<b>Citizenship</b> <input type="checkbox"/> U.S. CITIZEN <input type="checkbox"/> PERMANENT RESIDENT <input type="checkbox"/> NON-RESIDENT ALIEN*		<b>Current Program</b>	
*If non-resident alien, please list your visa status: _____			
<b>First Term of Enrollment</b> <input type="checkbox"/> FALL <input type="checkbox"/> SPRING <input type="checkbox"/> SUMMER I    _____ <input type="checkbox"/> SUMMER II    year		<b>Degree Level</b> <input type="checkbox"/> DOCTORAL <input type="checkbox"/> MASTERS	
<b>Anticipated Completion Term</b> <input type="checkbox"/> FALL <input type="checkbox"/> SPRING <input type="checkbox"/> SUMMER I    _____ <input type="checkbox"/> SUMMER II    year			
<b>Campus</b> <input type="checkbox"/> BLACKSBURG <input type="checkbox"/> HAMPTON ROADS <input type="checkbox"/> NATIONAL CAPITAL REGION <input type="checkbox"/> RICHMOND <input type="checkbox"/> ROANOKE <input type="checkbox"/> SOUTHWEST VIRGINIA			
<b>Date of ETD Submission:</b> _____			

### Review and Acceptance - Required Signatures

The final thesis/dissertation has been reviewed and accepted by the Committee Chairperson and the Advisory Committee.

**ACTION CODE**    **Committee Members, please indicate your approval of this student's thesis/dissertation by selecting one of the following codes before your signature: A: Approved, D: Disapproved.**

SIGNATURES

<input type="checkbox"/> A	<input type="checkbox"/> D	COMMITTEE MEMBER signature	printed name	e-mail (@vt.edu, preferred)	date
<input type="checkbox"/> A	<input type="checkbox"/> D	COMMITTEE MEMBER signature	printed name	e-mail (@vt.edu, preferred)	date
<input type="checkbox"/> A	<input type="checkbox"/> D	COMMITTEE MEMBER signature	printed name	e-mail (@vt.edu, preferred)	date
<input type="checkbox"/> A	<input type="checkbox"/> D	COMMITTEE MEMBER signature	printed name	e-mail (@vt.edu, preferred)	date
<input type="checkbox"/> A	<input type="checkbox"/> D	COMMITTEE CHAIRPERSON signature	printed name	e-mail (@vt.edu, preferred)	date
<input type="checkbox"/> A	<input type="checkbox"/> D	COMMITTEE CO-CHAIRPERSON signature	printed name	e-mail (@vt.edu, preferred)	date
<input type="checkbox"/> A	<input type="checkbox"/> D	DEPARTMENT HEAD signature or authorized GRADUATE PROGRAM DIRECTOR	printed name	e-mail (@vt.edu, preferred)	date

**Questions?** Call 540/231-8636 or e-mail [gradappl@vt.edu](mailto:gradappl@vt.edu) for assistance.







Obtain all required signatures and submit the original to the Graduate School. Attach a second form if more space is needed.

PERSONAL INFO

LAST/FAMILY NAME	FIRST/GIVEN NAME	MIDDLE NAME	SUFFIX
<b>Student ID Number:</b> _____		<b>Citizenship</b> <input type="checkbox"/> U.S. CITIZEN <input type="checkbox"/> PERMANENT RESIDENT <input type="checkbox"/> NON-RESIDENT ALIEN* <i>*If non-resident alien, please list your visa status:</i> _____	
<b>Date of Birth:</b> _____ <small>month/day/year</small>		<b>Current Program</b> _____	
<b>E-mail Address:</b> _____ <small>@vt.edu account, preferred</small>		<b>Degree Level</b> <input type="checkbox"/> DOCTORAL <input type="checkbox"/> EDUCATION SPECIALIST <input type="checkbox"/> MASTERS	
<b>Daytime Phone:</b> _____ <input type="checkbox"/> Home <input type="checkbox"/> Office <input type="checkbox"/> Mobile		<b>First Term of Enrollment</b> <input type="checkbox"/> FALL <input type="checkbox"/> SPRING <input type="checkbox"/> SUMMER I    _____ <input type="checkbox"/> SUMMER II    year	
<b>Local Address</b> _____ _____ _____		<b>Anticipated Completion Term</b> <input type="checkbox"/> FALL <input type="checkbox"/> SPRING <input type="checkbox"/> SUMMER I    _____ <input type="checkbox"/> SUMMER II    year	
_____ city                                  state                  zip                  country		<b>Campus</b> <input type="checkbox"/> BLACKSBURG <input type="checkbox"/> HAMPTON ROADS <input type="checkbox"/> NATIONAL CAPITAL REGION <input type="checkbox"/> RICHMOND <input type="checkbox"/> ROANOKE <input type="checkbox"/> SOUTHWEST VIRGINIA <input type="checkbox"/> VIRTUAL	

REQUIRED INFO

Drop						
DEPARTMENT	COURSE NUMBER	TITLE	GRADES	CREDIT HOURS	SEMESTER	YEAR

  

Add						
DEPARTMENT	COURSE NUMBER	TITLE	GRADES	CREDIT HOURS	SEMESTER	YEAR

SIGNATURES

STUDENT SIGNATURE	date		
<b>Required Signatures</b>			
COMMITTEE CHAIRPERSON signature	printed name	e-mail (@vt.edu, preferred)	date
COMMITTEE MEMBER signature	printed name	e-mail (@vt.edu, preferred)	date
COMMITTEE MEMBER signature	printed name	e-mail (@vt.edu, preferred)	date
COMMITTEE MEMBER signature	printed name	e-mail (@vt.edu, preferred)	date
COMMITTEE MEMBER signature	printed name	e-mail (@vt.edu, preferred)	date
DEPARTMENT HEAD signature or authorized GRADUATE PROGRAM DIRECTOR	date		
DEPARTMENT CONTACT (GRADUATE STAFF COORDINATOR) signature	date		
GRADUATE SCHOOL signature	date		

**Return your completed form to:**  
**Graduate School**  
 Graduate Life Center at Donaldson Brown  
 Virginia Tech (0325) • Blacksburg, VA 24061  
 Fax: 540/231-2039

Questions? Call 540/231-8636 or  
 e-mail [gradappl@vt.edu](mailto:gradappl@vt.edu) for assistance.







The Plan of Study (POS) should consist of graduate coursework not older than 5 years at the time of approval. In some cases, graduate coursework older than 5 years can be justified and may be included on the POS. Justification for inclusion of such coursework should be assessed by the advisor with the support of the student's **entire Advisory Committee**. The Course Justification process represents an evaluation of the **student's currency in the subject matter** relevant to the pursuit of one's graduate degree.

STUDENT INFORMATION

STUDENT'S LAST NAME \_\_\_\_\_ STUDENT'S FIRST NAME \_\_\_\_\_ STUDENT ID NUMBER \_\_\_\_\_

COURSE NUMBERS	TITLES OF COURSES TO BE JUSTIFIED	YEARS COURSES TAKEN

By signing below, all faculty Committee members and Department Head or authorized faculty Graduate Program Director attest that the student noted above **has remained current in the body of knowledge for all courses** more than 5 years old that are included on the POS and that the student's **full** Committee has thoroughly assessed the student's currency in the subject matter via one or more of the following Graduate School approved Justification strategies.

**Check all those that apply:**

- The student is working in the field (Currency is provided and verified by **attaching only the specific section of the student's professional employment Vitae** that relates to the course(s) in question);
- External certification within the past 5 years by a nationally recognized organization (attach verification of vitae);
- Other related courses on the POS provide subject matter currency;
- The thesis/dissertation research requires currency in the field through work with current literature;
- The student will be tested on a **written** Preliminary Examination (Attach day, time, and location of examination).

SIGNATURES

**Advisory Committee Signatures (Required of ALL Committee Members)**

signature \_\_\_\_\_ printed name \_\_\_\_\_ e-mail (@vt.edu, preferred) \_\_\_\_\_ date \_\_\_\_\_

signature \_\_\_\_\_ printed name \_\_\_\_\_ e-mail (@vt.edu, preferred) \_\_\_\_\_ date \_\_\_\_\_

signature \_\_\_\_\_ printed name \_\_\_\_\_ e-mail (@vt.edu, preferred) \_\_\_\_\_ date \_\_\_\_\_

signature \_\_\_\_\_ printed name \_\_\_\_\_ e-mail (@vt.edu, preferred) \_\_\_\_\_ date \_\_\_\_\_

signature \_\_\_\_\_ printed name \_\_\_\_\_ e-mail (@vt.edu, preferred) \_\_\_\_\_ date \_\_\_\_\_

DEPARTMENT HEAD signature \_\_\_\_\_ printed name \_\_\_\_\_ e-mail (@vt.edu, preferred) \_\_\_\_\_ date \_\_\_\_\_  
 or authorized GRADUATE PROGRAM DIRECTOR

**Return your completed form to:**  
**Graduate School**  
 232 Graduate Life Center  
 at Donaldson Brown  
 Virginia Tech (0325)  
 Blacksburg, VA 24061  
 Fax: 540/231-1670

GRADUATE SCHOOL DEAN signature \_\_\_\_\_ date \_\_\_\_\_

**Questions?** Call 540/231-5645 or e-mail [gradappl@vt.edu](mailto:gradappl@vt.edu) for assistance.





## ACCELERATED UNDERGRADUATE/GRADUATE DEGREE AND COURSE DESIGNATION FORM

This form is used as a cover sheet to notify the Graduate School that the department supports a student's pursuit of the following program. Students must also submit a formal Graduate School application for admission and be admitted to the designated program, prior to receipt of this form. All course information must be completed in full. Requests that do not provide required information *cannot* be processed.

Check applicable program:  
 Please refer to the Undergraduates Taking Graduate Courses section within the current Graduate Catalog for specific requirements detailing each status.  
[www.grads.vt.edu](http://www.grads.vt.edu) (Academics/Graduate Catalog)

- |   |  |
|---|--|
| <input type="checkbox"/> ACCELERATED UG/GR DEGREE | <input type="checkbox"/> DUAL STUDENT STATUS                         |
| <input type="checkbox"/> BACHELORS TO MASTERS     | <input type="checkbox"/> 152HR ACIS MASTERS DEGREE                   |
| <input type="checkbox"/> BACHELORS TO DIRECT PHD  | <input type="checkbox"/> COMBINED STUDENT STATUS (ARCHITECTURE ONLY) |

PERSONAL INFO

LAST/FAMILY NAME _____	FIRST/GIVEN NAME _____	MIDDLE NAME _____	SUFFIX _____
Student ID Number: _____	<b>Citizenship</b>		
Date of Birth: _____ <small>month/day/year</small>	<input type="checkbox"/> U.S. CITIZEN <input type="checkbox"/> PERMANENT RESIDENT <input type="checkbox"/> NON-RESIDENT ALIEN* <i>*If non-resident alien, please list your visa status: _____</i>		
E-mail Address: _____ <small>@vt.edu account, preferred</small>	<b>Current Program</b> _____		
Daytime Phone: _____ <small><input type="checkbox"/> Home   <input type="checkbox"/> Office   <input type="checkbox"/> Mobile</small>	<b>Campus</b>		
Local Address _____ _____ _____	<input type="checkbox"/> BLACKSBURG		
city _____ state _____ zip _____ country _____	<b>Anticipated Completion of Bachelors Degree</b>		
	<input type="checkbox"/> FALL <input type="checkbox"/> SPRING <input type="checkbox"/> SUMMER I   _____ <input type="checkbox"/> SUMMER II   _____ year		
	<b>Term to Begin Counting Graduate-Level Credit</b> <i>(within the last two semesters of the undergraduate degree)</i>		
	<input type="checkbox"/> FALL <input type="checkbox"/> SPRING <input type="checkbox"/> SUMMER I   _____ <input type="checkbox"/> SUMMER II   _____ year		
	<b>First Term of Enrollment as a Graduate Student</b>		
	<input type="checkbox"/> FALL <input type="checkbox"/> SPRING <input type="checkbox"/> SUMMER I   _____ <input type="checkbox"/> SUMMER II   _____ year		

REQUIRED INFO

TERM	YEAR	DEPARTMENT	COURSE NUMBER	CRN (IF KNOWN)	# OF CREDIT HOURS	COURSE TITLE

 UPDATED FROM INITIAL SUBMISSION

 \_\_\_\_\_  
 STUDENT SIGNATURE date

### Required Signatures

 \_\_\_\_\_  
 ADVISOR signature printed name e-mail (@vt.edu, preferred) date

 \_\_\_\_\_  
 DEPARTMENT HEAD signature printed name e-mail (@vt.edu, preferred) date  
 or authorized GRADUATE PROGRAM DIRECTOR

 \_\_\_\_\_  
 DEPARTMENT CONTACT (GRADUATE STAFF COORDINATOR) signature date

 \_\_\_\_\_  
 GRADUATE SCHOOL signature date

**Return your completed form to:**  
**Graduate School**  
 GLC at Donaldson Brown  
 Virginia Tech (0325)  
 Fax: 540/231-2039

**Questions?** Call 540/231-8636 or  
 e-mail [gradappl@vt.edu](mailto:gradappl@vt.edu) for assistance.

SIGNATURES