

WEST VIRGINIA UNIVERSITY
COLLEGE OF ENGINEERING AND MINERAL RESOURCES

Guidelines¹

For

MASTER OF SCIENCE DEGREE PROGRAMS

¹ Guidelines revised by the Graduate Programs and Research Committee April, 2004

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**WEST VIRGINIA UNIVERSITY
COLLEGE OF ENGINEERING AND MINERAL RESOURCES
MASTER OF SCIENCE DEGREE PROGRAMS**

The College of Engineering and Mineral Resources (CEMR) is authorized to admit qualified graduate students that lead to the Master of Science degree in:

- Aerospace Engineering
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Engineering
- Industrial Engineering
- Mechanical Engineering
- Mining Engineering
- Petroleum and Natural Gas Engineering
- Computer Science
- Industrial Hygiene
- Safety Management
- Software Engineering

This document describes the minimum CEMR requirements in any of the above degree programs. EACH DEPARTMENT MAY IMPOSE STRICTER REQUIREMENTS THAN THOSE LISTED BELOW.

The research and course work requirements of students are administered through research advisors, advisory and examining committees, academic advisors, and graduate program coordinators in the various departments. Their roles are described in Appendix I.

1. Admission

A student who wishes to enter any of the above degree programs must first submit to the West Virginia University Admissions Office:

- a. A completed application
- b. Transcripts of all college work attempted

There are three types of degrees granted in CEMR:

- a. M.S. in an engineering discipline (e.g. M.S.I.E., M.S.E.E., etc.)
- b. M.S. in Engineering, and
- c. M.S. in an applied science area (i.e., M.S. I.H., M.S.S.M., M.S.S.E., M.S.C.S.).

The M.S. degree in an engineering discipline requires an undergraduate degree in the same discipline. The Master's in Engineering degree is intended for students who wish an engineering Master's degree but do not have an undergraduate degree in the same field or a closely allied field. The applied science programs are intended for students wishing to obtain a Master's in these non-engineering disciplines.

The two types of engineering degrees both require a calculus-based undergraduate education in an accredited program or an internationally recognized program. The applied science areas do not. Note that admissions requirements are set by Departments and Program Areas.

Students wishing to pursue a Master of Science degree who do not hold a correspondingly named Bachelor's degree may be admitted into either a discipline-designated program (including the M.S. degrees in Computer Science, Industrial Hygiene, Safety Management, and Software Engineering) or the undesignated Master of Science in Engineering degree program, depending on their credentials. For Engineering degree programs, such students will normally be required to obtain a baccalaureate level of

proficiency in subjects directly related to their area of graduate study by taking undergraduate prerequisite courses, either prior to starting or as an integral part of their M.S. degree program. The degree designation and additional course requirements will be determined by the department admitting the student.

2. Entrance and Classification

Students admitted to the Master's degree program² will be classified in one of three categories:

- a. Regular – To be admitted as a *regular* graduate student, an applicant must have a grade point average (GPA) of 3.0 or better (out of a possible 4.0) in all previous college work, and must meet all other requirements set by the department.
- b. Provisional – An applicant not qualifying for the regular graduate student admission status, either due to insufficient GPA, incomplete credentials, or inadequate academic background, may be admitted as a *provisional* student. Any applicant with a GPA below 2.75 in any of his previous college work cannot be admitted without approval from the Dean or designate.

Requirements for attaining regular student status must be determined by the regularly constituted Admissions Committee and stated in a letter or form sent to the student by the department or program area prior to registration for coursework. The letter or form should include the following:

- i. Reason not qualified for regular admission (e.g., deficient prerequisites, GPA, or both).
- ii. Coursework deficiencies, if any and courses at WVU to correct the deficiencies (which must be passed with a "C" or better).
- iii. Notification that the student must attain at least a 3.0 in his or her first 12 hours of graduate coursework.
- iv. Notification that the student cannot graduate until all coursework deficiencies has been remediated.

The student should be asked to sign the form or letter in acknowledgment that he or she received it. A copy of the form should be given to the student and another placed in the student's file.

The proposed plan of study (see section on Plan of Study) for provisional students, including courses to remove deficiencies and courses to be counted for graduate degree credit, must be such that a decision regarding qualification for change of status to regular student can be made at the end of the semester in which the 18th credit hour is completed. It should be noted that the student may still be required to take additional regular courses upon attainment of regular student status.

- c. Non-degree – A student who is not deemed qualified for admission to regular or provisional status, or who does not desire to pursue a degree, may be admitted as a *non-degree* student. Each department determines the minimum qualification requirements for admission as non-degree students. Such students are allowed to take graduate courses but are not allowed to pursue a graduate degree. These students may later request a change of status (see Section 3, Classification Change, and Section 12, Status Change).

3. Classification Change

The following steps must be followed for a student to be reclassified from provisional to regular:

- a. A request for [Removal of Provisional Status](#) must be initiated by the student through the department graduate program coordinator no later than the end of the semester in which the student completes his or her 18th credit hour. The student must demonstrate that he or she has met the conditions listed when he or she was accepted (see 2b).

² A general, summary description of process and requirements are described in the [MS Degree Flowchart](#)

- b. The Dean or designate approves the classification change, records the decision in the student's record, and forwards the approved decision to the Graduate Unit of the Admissions & Records Office for modification of the student's permanent record.

The following steps must be followed for a student to be reclassified from non-degree to regular or provisional:

- a. A request for reclassification must be initiated by the student through the relevant program Admissions Committee Chair.
- b. The Admissions Committee must determine whether the student meets admissions requirements in the same manner and with the same standards as a new application. The Committee may consider courses taken successfully as a non-degree student as evidence that prerequisites have been met and that the student is or is not potentially capable. However, successful completion of program coursework does not in any way obligate the Committee to change the student's status. The Committee may reject a change of status even for students who demonstrate they meet all requirements for admission, in the same way and for the same reasons that they might choose not to admit other qualified applicants (e.g., student's research interests not a good fit with program capabilities, limited resources, better applicants available, etc.).

4. Test Scores

Departments may require applicants to submit scores achieved in the General Test and/or Subject Test of the Graduate Record Examination (GRE).

A minimum score of 213 (equivalent to 550 on the former scale) on the Test of English as a Foreign Language (TOEFL) is required for all applicants from countries where the native language is not English. This requirement will be waived for students who have completed a recent four-year Bachelor's degree in the United States. In some cases, it may be possible to consider applications from students who lack adequate TOEFL scores but who will enroll in the West Virginia University Intensive English Program.

5. Residency

There are no specific residency requirements.

6. Off-Campus

There are no specific requirements for off-campus study.

7. Program Options and Hours

The faculty of the College of Engineering and Mineral Resources believes that one of the desirable characteristics of graduate education is the experience gained in performing and reporting a research endeavor. Consistent with that philosophy, the College is authorized to grant Master's degrees under each of the following three options:

- a. Thesis Option – This option requires a minimum of 24 credit hours of course work and at least six credit hours of research leading to the thesis. **Only courses with grades of A, B, or C (not S) can be used to meet the minimum coursework requirements.** Permanent grades of S/U only will be recorded for thesis research credits.
- b. Problem Report Option – This option requires a minimum of 30 credit hours of course work and at least three credit hours of a research or design project leading to a formal written report. . **Only courses with grades of A, B, or C (not S) can be used to meet the minimum coursework requirements.** Permanent grades of S/U only will be recorded for problem report research credits.
- c. Course Work Option – This option requires a minimum of 33 credit hours of course work. There are two ways this option is implemented.

First, although rarely permitted, this option is open to students who have practical engineering experience and/or have demonstrated an ability to organize and develop a project and write a technical report. Approval to pursue this option must be obtained from the student's Advisory and Examining Committee (AEC), the graduate program coordinator, and the department chair.

Second, a department can choose to offer students within a designated program the course work only option.

Normally, for each option the coursework required is greater than that required for a student doing a thesis or problem report. In addition, the department must require successful completion of a written or oral comprehensive examination.

8. Course Requirements

There are no specific course requirements imposed by the College; however, no more than 40 percent of course work at the 400 level can count toward meeting Master's degree requirements. Only courses for which a grade of "A", "B", or "C" is earned can count toward fulfilling the minimum course requirements for the degree.

9. Transfer Credit

A student wishing to apply credit earned at another institution to a Master's degree at WVU must complete the standardized form [Application for Transfer of Graduate Credit to WVU](#). This form requires the signature of the appropriate department chair or graduate program coordinator. The student must also have an official transcript from the external institution sent to Admissions & Records.

A maximum of 12 semester credit hours from other institutions may be transferred for credit at WVU in Master's programs in CEMR. Individual graduate programs can choose to accept fewer transfer credit hours. Only courses with grades of "A" or "B" may be considered for transfer.

A student desiring to obtain more than one Master's degree must successfully complete sufficient additional credit hours to constitute 75 percent of the credit hours required by the additional Master's degree program. Individual departments may require higher percentages of credit to be earned under their direction.

After the student completes the appropriate section of the application form, the department chair or graduate coordinator will perform the following tasks:

- a. Verify that courses from other institutions qualify as valid graduate level work.
- b. Verify that the request is within the maximum number of credit hours defined in 9b or 9c.
- c. Verify that the credit has been earned within the acceptable time limit (see section 15).

When the completed application form is returned to the CEMR Office of Student Services, it will then be forwarded to the University Office of Admissions & Records. That Office will match forms with transcripts and enter the credit on the student's permanent record.

10. Advisory and Examining Committee (AEC)

Each department will form an Advisory and Examining Committee (AEC) for each of its Master's degree students, consisting of at least three members (with one member clearly designated as chairperson). The chair of the AEC and the majority of its members must be regular members of the graduate faculty and must have a primary faculty appointment in CEMR. The majority of the AEC members must be tenure track CEMR faculty. No more than one person may be a non-member of the graduate faculty.

The committee must be formed by the end of the second semester of attendance by the student or by the completion of the twelfth course credit hour applicable to the Master's degree requirements, whichever is later. Otherwise, the student will not be allowed to register for the following semester.

Any change in the AEC will require a [Plan of Study Attachment](#) as described in section on Plan of Study.

11. Plan of Study

An [MS Plan of Study](#) must be prepared by the student and the AEC chair. This plan must be approved by the student, all members of the AEC, the graduate program coordinator, the department chair, and the dean, before the end of the second semester of the student's attendance or before the completion of the twelfth course credit hour applicable to the Master's degree requirements, whichever is later. This plan must also include a preliminary thesis research topic or problem report topic, if applicable.

Any revisions to a plan of study (including any changes to the AEC) will necessitate submission of a revised plan which incorporates all approved signatures. Any changes to the AEC must be signed by the previous and new members of the committee, to the extent that a previous committee member is available on campus. In addition, the removal of any member of the AEC requires submittal of a [Plan of Study Attachment](#).

12. Academic Status

The minimum academic standards for graduate students are as follows:

- a. Regular – To be in good standing, a *regular* student must maintain at least a 3.0/4.0 grade point average throughout the time enrolled in graduate work. A student failing to achieve this standard will be placed on probation. A full-time student on probation must achieve a cumulative grade point average of 3.0 by the end of the next regular enrollment period at WVU. In the case of a part-time graduate student on probation, a 3.0 cumulative GPA must be obtained in the next nine course credit hours of graduate study. A probationary student who does not attain the required average will be suspended from CEMR for one semester.
- b. Provisional – A provisional student must obtain a minimum cumulative grade point average of 3.0 after the first nine course credit hours of graduate study and maintain at least this average throughout the remaining time enrolled in graduate work as a provisional student. By the end of the semester in which the 18th course credit hour is completed, the student must qualify for regular student status. Students who meet the provisions of admission and the required grade point average should follow the procedure outlined in Section 3. Students failing to achieve regular students status by the end of the semester in which the 18th course credit hour is completed will be suspended.
- c. Non-degree – To be in good standing in CEMR, a non-degree student must obtain a minimum cumulative grade point average of 3.0/4.0 after the first nine course credit hours of graduate study and maintain at least this average throughout subsequent enrollment in graduate work. A full-time student failing to achieve this standard will be placed on probation and must achieve a cumulative GPA of 3.0 by the end of the next enrollment period (or nine course credit hours for part-time students) at WVU. Students who do not attain the required average will be suspended from the College.

A non-degree student who later wishes to apply for admission to a degree program must have achieved a minimum cumulative grade point average of 3.0/4.0 for all course work taken since admission as a non-degree graduate student to be considered for change of status (see Section 3) to provisional or regular. A maximum of 12 hours of course work taken by a non-degree student can be applied toward fulfilling the degree requirements if approved by the graduate program coordinator for that program.

A graduate student suspended from the College can apply for reinstatement only after at least one semester of suspension has been served. Request for reinstatement is done by direct petition to the Dean. After serving suspension a graduate student may be readmitted, but only once, and must achieve a grade point average of 3.0/4.0 or better in each semester following readmission from suspension until a 3.0 cumulative grade point average is reached.

13. Full-time/Part-time

A student is classified as either full-time or part-time in any given enrollment period. A graduate student is classified as full-time if enrolled for at least nine hours in a semester and at least a total of six hours in the two summer sessions.

14. Maximum Course Load

No more than 15 credit hours of graduate courses may be carried by a student in any semester. During the summer, no more than 12 credits may be earned in the total of the two summer sessions. Exceptions to this rule can occur only with the written approval of the graduate program coordinator and Dean or the Dean's designate.

15. Maximum Time for Completion

All requirements for the Master's degree must be completed within eight years preceding the student's graduation. This is a WVU requirement. Courses taken more than eight years previously must be revalidated for Master's degree credit. Refer to the WVU graduate catalog for the revalidation procedure.

16. Withdrawal from the University

A graduate student seeking to withdraw from the University must follow established University procedures. The student must report to the Office of Student Life, which will direct the student to the appropriate office(s).

17. Final Examination(s)

All candidates for the Master's degree must pass a final oral and/or written examination. The student will initiate the request for the final examination using the [Request for Final Examination Form](#) (refer to the Section on Deadlines for further details). The department will report the results of the final examination to the Dean's Office. More than one member of the AEC casting a negative vote will constitute a failure of this examination. The student must be given at least one opportunity for re-examination.

18. Petition to Resolve Controversies

Attempts to resolve controversies regarding a graduate student's academic progress should first be made between the student and the chairperson of the AEC, followed by the graduate program coordinator, the department chair, and the Dean, in this order. If no satisfactory solution of problems can be achieved by the above procedure, the student may then follow the formal University Grievance and Appeal procedures. The Code of Student Rights and Responsibilities addresses both academic and non-academic rights and responsibilities, sanctions, and procedural due process, and includes procedures for undergraduate, graduate, and professional students. The document outlines the procedures to be followed in handling graduate student grievances and appeals.

19. Quality Control

The quality control of each program will be the joint responsibility of the AEC, the graduate program coordinator, the chair of the department, and the Dean.

20. Thesis and Problem Report Guidelines

The AEC must approve the thesis/problem report, with no more than one member not signing the thesis/problem report approval sheet, before this requirement for degree completion can be considered completed.

The thesis must be produced according to the University's Regulations Governing the Preparation of Theses, found at [West Virginia University Electronic Thesis and Dissertation](#) website. An electronic

version of the approved thesis must be submitted to the University library along with the ETD packet. Approval must be obtained from the library.

Problem reports must be prepared according to the format specified by the department.

The department may require additional copies of the approved thesis/problem report for its library and for the AEC members.

21. Certification for Graduation

The Dean's Office will certify whether the student has met the requirements for graduation. To be eligible for graduation, each candidate must attain a GPA of 3.0/4.0 or better GPA for all courses taken as a graduate student at WVU and all WVU courses applied toward meeting degree requirements. The following grade point values apply: A = 4, B = 3, C = 2, D = 1, F = 0, U = O.

22. Deadlines

Exact dates for the following deadlines should be obtained every semester from the graduate program coordinator. It is the student's responsibility to meet all deadlines. Failure to meet the specified deadlines may result in delay of graduation to the following semester.

- a. Application for Graduation and Diploma - An application for graduation and diploma must be filed in the Dean's Office no later than 10 weeks before the graduation date. This form is only available by contacting the Students Services Office or by emailing CEMR_GradServices@mail.wvu.edu. The graduation date for each semester can be obtained from the College Office of Student Services.
- b. Request for Final Examination - Requests to the Dean's Office using the Request for Final Exam AEC chairman, research advisor, graduate program coordinator, and academic advisor form must be made by the AEC chair at least 1 week prior to the oral defense deadline set by the WISE University Library, as specified for a given semester/summer session. Approval by the Dean's Office should follow no later than one week from the request. No examination is to be given until the approval is received. A new form must be filed each time the examination is re-scheduled or repeated.
- c. Final Examination - Final examinations must be given according to the suggested deadlines set by the WISE University Library, specified for a given semester/summer session. Early scheduling of the final examination is recommended in order to comply with deadlines specified in items "d" and "e" in this section. The results, through the return of the signed shuttle sheet, must be delivered to the Dean's Office within 24 hours of the defense.
- d. Thesis - To graduate in a given semester/summer session, the student must submit to the University library an electronic copy of the approved thesis using the web site: [West Virginia University Electronic Thesis and Dissertation](#) along with the ETD packet, according to the deadline set by the Library. The WISE Library will notify the Office of Student Services upon the initial submission and again when approval has been given.
- e. Problem Report - The student may need to provide the department chair and AEC members with copies of the report, prior to obtaining the departmental approval for graduation, as detailed in Section 20.
- f. Final Deadlines - The Alumni Data Form must be completed and delivered to the departmental graduate program coordinator at least one week before the graduation date. The Final Approval for Graduation form must be completed and delivered to the Dean's Office at least one week before the graduation date. If this form is not submitted, the student will not graduate.

23. Graduation

After successful completion of the final examination, students must complete the [Final Approval for Graduation](#) form and submit it to the Student Services office along with their [Graduate Program Alumni Data Form](#). Students must be enrolled at WVU in the semester they plan to graduate. Students in their

final semester, who have no course work or research to complete, can register for 1 credit hour, usually research, to satisfy the University enrollment requirement. Students must pay a University diploma fee in the semester they plan to graduate. Students failing to graduate in the semester for which they applied will be required to enroll again and pay an additional diploma fee.

If registering during the first week of classes, students may register on line using the [WVU STAR Home](#) site. Students not completing registration during the first week of classes can register up to the tenth week of the Fall or Spring semesters respectively for December and May graduation or up to the third week of Summer Session II for August graduation. This late registration requires a special letter available from the Student Services Office.

International students who are in their final semester and need to register for just 1 hour are required to obtain a letter from their advisors stating completions of requirements have been met, a registration form signed by their advisor, and a letter from the CEMR Office of Student Services, (in this order) to be taken by the student to the International Students Office. Upon receipt of these documents, the International Students Office will grant the student permission to register for 1 hour.

24. Undergraduate Enrollment in Graduate Level Courses

- a. For Undergraduate Credit
 - i. Undergraduate students enrolling in a 500 Level Course for Undergraduate Credit must complete an [Application to Enroll in a 500 Level Course for Undergraduate Credit](#) form. This form must be approved by the advisor and instructor prior to the time of enrollment and returned to the College Office of Student Services, Room 141 ESB, to obtain approval of the Associate Dean for Academic Affairs. Final approval will be granted after the class roster has been distributed and the percentage of undergraduate enrollment has been verified. In the event that the undergraduate enrollment exceeds 20%, approval will be granted according to the date of submission of the request.
 - ii. The following conditions must be satisfied in order to enroll in a 500 level course for undergraduate credit:
 - Enrollment is permitted only in courses numbered 500-599 (old 300-399).
 - The undergraduate student must be classified as either a junior or a senior and must have a GPA of at least 3.0 on a 4.0 scale.
 - Undergraduate enrollment in a graduate level class should not exceed 20% of the total enrollment of the class.
 - Permission forms must be approved prior to, or at the time of, enrollment.
 - iii. Approved permission forms are to be returned to advisors and retained in the student's file. Students enrolled in graduate level courses that do not or cannot obtain permission to take the course must drop the class.
- b. For Graduate Credit Via Senior Petition
 - i. Undergraduate seniors enrolling in a 400-500 level course for graduate credit must complete a [Senior Petition for Graduate Credit](#) form. This form must be approved by the advisor and instructor prior to the time of enrollment and returned to the College Office of Student Services, Room 141 ESB, to obtain approval of the Associate Dean for Academic Affairs. Final approval will be granted after the class roster has been distributed and the percentage of undergraduate enrollment has been verified. In the event that the undergraduate enrollment in a 500 level course exceeds 20%, approval will be granted according to the date of submission of the request.
 - ii. The following conditions must be satisfied for students to enroll in 400-500 level courses for graduate credit.)
 - Student must be within 12 semester hours of graduation.
 - Student must have a cumulative grade point average of at least 3.0 on a 4.0 scale.
 - Combined graduate and undergraduate credit must not exceed 18 hours in one semester or 6 hours in a six week summer session.
 - Course undergraduate enrollment in a 500 level course can not exceed College Policy.
 - Coursework may not be counted for both undergraduate and graduate credit.

- Undergraduate students may not enroll in 600 level courses.
- iii. Approved permission forms are to be returned to advisors and retained in the student's file. Students enrolled in graduate level courses that do not or cannot obtain permission to take the course must drop the class.

25. Intra-University Transfer

- a. A student may initiate a transfer to another department within the College or another program within the University by contacting the graduate program coordinator. The department Graduate Program Coordinator will then send the student's departmental file, along with the University "Academic Status Update for General Student" form to the college office of Student Services to initiate the transfer process. The office of Student Services will then make a copy of the academic history of the student, attach it to the "Academic Status Update For General Student" form and send it to the appropriate department for review.
- b. After a decision is made by the new department to accept the transfer, a copy of the "Academic Status Update for General Student" form is made for the accepting department and the original form is returned to the Dean's Office in CEMR. This office will then forward the student's file to the new department. The original "Academic Status Update for General Student" form is sent to Admissions & Records so that the students' correct status is reflected in their files. The copy of the "Academic Status Update for General Student" form is used to update the Dean's Office of Student Services files and filed accordingly. If the student is not accepted, the departmental file is returned to the department originating the request and the student may remain in that department.

APPENDIX I:

Clarification of roles for AEC chairman, research advisor, graduate program coordinator, and academic advisor

The Advisory and Examining Committee (AEC) advises the student in the selection of courses and in the conduct of the student's research program. The AEC also evaluates the technical quality of the student's research and evaluates the final thesis or problem report. Normally, the chairman of the AEC is also the director of the student's research (research advisor).

The graduate program coordinator is the person designated by the department chair to assure that the regulations governing the student's graduate program have been fulfilled.

The academic advisor is the person who approves the student's course selections each semester, approves registration and add/drop forms, and maintains the student's files.

The roles of the AEC chairman, research advisor, graduate program coordinator, and academic advisor may be vested in from one to four individuals, depending on the policies of the individual department