

GRADUATE STUDENT POLICIES

DEPARTMENT OF CHEMICAL AND BIOLOGICAL ENGINEERING

Colorado State University

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Introduction

Welcome to the Department of Chemical and Biological Engineering. We hope that you enjoy your program of study and work in our department.

The Graduate Student Policies are designed to inform graduate students of their role and responsibilities in the Department of Chemical and Biological Engineering. The intent of the policies is to make explicit the program requirements and expected behavior of graduate students in the department. It is your responsibility to familiarize yourself with these policies and to abide by them.

If you have questions, comments, or concerns about your program or the department, please contact your adviser, department staff, or the department chair. Early in the year the graduate students will select a representative to meet with the faculty advisory committee, and concerns of a general nature may be relayed through this representative.

A. DEGREE REQUIREMENTS

We expect every graduate student to complete his or her degree program before leaving campus. It is extremely difficult to finish a graduate degree program, no matter how much or how little remains to be done, if a student elects to leave before completion. Not only does this put the degree program in jeopardy, but it also prevents the completion of the research process, including completion of research reports and publications.

M.S. Degree Plan A (Thesis option)

1. A minimum of 30 semester credits of course work and research must be approved for graduate credit by the student's graduate committee. Twenty-four (24) of the 30 credits must be earned at Colorado State University and may include classes conducted through SURGE. Twenty-one (21) of the credits must be earned after admission to the Graduate School.
2. At least 16 semester credits at Colorado State University must be taken in courses numbered 500 or above, including thesis credits. Of the 16, at least 12 credits must be in regular (lecture/laboratory) courses. A maximum of six (6) credits of thesis research may be counted towards the degree requirements.
3. Participation in the introductory departmental seminar course, CB 693, is required. The CB 693 course should be taken as early as possible in the graduate program.
4. Participation in the departmental research seminar course, CB 793-A is required. You should register for CB 793-A every semester, except when other course work conflicts with the seminar. One credit will be counted toward graduation requirements.

Each graduate student is expected to present a seminar on his or her research topic before

graduation.

5. At least one 500 level course (3 credits) in Mathematics or Statistics is required. A 400 level course in Statistics may be substituted at the discretion of the student's graduate committee.
6. M.S. candidates in ChE must take CB 501, CB 502 and CB 503 or their equivalents. CB 521 may be taken to satisfy the applied mathematics requirement.
7. An acceptable thesis must be submitted to and approved by the student's graduate committee.
8. Satisfactory performance on a final comprehensive examination administered by the student's graduate committee is required.
9. It is expected that the student's M.S. research will result in at least one refereed publication or other high caliber technical publication. See Section Q below for further details.

M.S. Degree Plan B (Non-thesis option)

1. A minimum of 32 semester credits of course work and research must be approved for graduate credit by the student's graduate committee. Twenty-four of the 30 credits must be earned at Colorado State University and may include classes conducted through SURGE. Twenty-one of the credits must be earned after admission to the Graduate School.
2. At least 16 semester credits at Colorado State University must be taken in courses numbered 500 or above. At least 12 credits must be in regular (lecture/laboratory) courses.
3. Participation in the introductory departmental seminar course, CB 693, is required. The CB 693 course should be taken as early as possible in the graduate program.
4. Participation in the departmental research seminar course, CB 793-A, is required. It is expected that the student will register for CB 793-A every semester, except when other course work conflicts with the seminar. One credit will be counted toward graduation requirements.
5. At least one 500 level course (3 credits) in Mathematics or Statistics is required. A 400 level course in Statistics may be substituted at the discretion of the student's graduate committee.
6. M.S. candidates in ChE must take CB 501, CB 502 and CB503 or their equivalents. CB 521 may be taken to satisfy the applied mathematics requirement.
7. A scientific or technical report must be submitted, for which two semester credits are generally received.
8. Satisfactory performance on a final comprehensive examination administered by the student's graduate committee is required.

Ph.D. Degree

1. A minimum of 72 semester credits beyond the Bachelor's degree must be approved for credit by the student's graduate committee with at least 32 credits earned after admission to the doctoral program at Colorado State University. A master's degree from an accredited college or university may be accepted for a maximum of 30 credits. Up to 10 credits of course work taken after completion of the student's Master's degree may be accepted for transfer.

2. A minimum of 40 semester credits beyond the Bachelor's degree must be at or above the 500 level. A maximum of 30 credits of research at the doctoral level may be counted towards the degree requirements. The number of research credits for the doctoral dissertation will be determined by the student's graduate committee.

3. Participation in the appropriate introductory departmental seminar course, CB 693, is required. The CB 693 course should be taken as early as possible in the graduate program.

4. Participation in the appropriate departmental research seminar course, CB 793-A, is required. It is expected that the student will register for CB 793-A every semester, except when other course work conflicts with the seminar. One credit will be counted toward graduation requirements.

It is expected that each graduate student will present a seminar on his or her research topic before graduation.

5. At least two 500 level courses (6 credits) in Mathematics or Statistics are required.

6. Ph.D. candidates in ChE must take CB 501, CB 502 and CB 503 or their equivalents. CB 521 may be taken to satisfy the one of the applied mathematics requirements.

7. A qualifying examination may be required at the beginning of the Ph.D. program. The adviser is responsible for making arrangements for the qualifying examination if such an examination is not administered by the program.

8. Satisfactory performance on a preliminary examination is required. This examination must be conducted at least two semesters before the final oral examination. The form of the

preliminary examination is determined by the student's graduate committee; it may be in multi-part format and may consist of both written and oral components.

9. An acceptable dissertation must be submitted to and approved by the student's graduate committee.

10. Satisfactory performance on a final oral examination, which includes a defense of the dissertation, is required.

11. It is expected that the student's Ph.D. research will result in at least two refereed publications or other high caliber technical publications. See Section Q below for further details.

B. PROGRAM OF STUDY

Each student must meet with his or her adviser to formulate a program of study, which must be submitted to the Graduate School on form GS-6. In preparing the program of study, all background or make-up courses must be identified, a research area must be proposed, a program of course work identified, and a graduate committee nominated. The Graduate School requires that the student submit the GS-6 before the end of the third semester of registration. However, it may be necessary to submit the GS-6 earlier in order to finalize the course work program. Submission of the GS-6 form is typically a requirement of CB 693 taken during the student's first semester. (Please refer to the *2001-2002 Graduate and Professional Bulletin*, pp. 17 and 18.)

C. REGISTRATION

All graduate students at Colorado State University are required to be continuously registered in the fall and spring semester throughout their degree programs. This policy applies to the time of first enrollment through the graduation term. Registration is also required during the summer term if University resources are used*. Students may fulfill this requirement by registering for any graduate credit-bearing course (regular or non-regular). As an alternative, students may opt for Continuous Registration (CR) status. Registration for CR status is accomplished in the same way as registration for courses. Section ID numbers for on-campus (primarily on-campus) and off-campus (absent from campus) appear in the class schedule under the CR prefix (CR-ON and CR-OFF). (Please refer to the *2001-2002 Graduate and Professional Bulletin*, pp. 20 and 21, for more information about continuous registration).

*Students on *summer assistantships* must register for CR-ON or regular credit course(s) in order to remain on an assistantship.

Graduate students registered full time (9 or more credits) are encouraged to maximize their registration to 15 credits.

D. RESIDENCY

It is the responsibility of all U.S. and other eligible graduate students who receive financial support to take immediate action to obtain Colorado residency upon initiation of their graduate program. Department policy and financial resources do not permit payment of nonresident tuition for these students after the first year. In order to secure Colorado residency for the second year, students must accomplish **all** of the required tasks for demonstrating that they are domiciled in Colorado **before the first day of classes**. The specific requirements are described in the *Graduate and Professional Bulletin*.

E. CONTACT WITH GRADUATE COMMITTEE

It is your responsibility to keep your committee informed of progress towards completion of the

degree requirements. It should be noted that the committee functions not only in an advisory role for the student, but also as an examining body at the end of the program. It is necessary to maintain contact with the committee throughout the degree program. A progress report (verbal or written) at a minimum of once per semester (or about three times per year) is required. More frequent contact with the committee is desirable and is encouraged.

F. HOUSEKEEPING AND SAFETY

All students are required to attend a Hazard and Safety Orientation and Training workshop during their first semester of registration in the graduate program. The workshop must be attended before any research activity is commenced if the research deals with hazardous chemicals or has a safety risk. Additional hazardous chemical update training is required annually for students and faculty involved in laboratory work.

Research laboratories and study desks are places of work which require a serious work attitude. All graduate students are expected to follow departmental operating rules associated with these work areas. For safety reasons these areas must be kept clean, tidy and organized at all times. In addition, safe work practices must be followed in all activities.

A graduate student using university or departmental vehicles must be an employee of the university and have a valid Colorado driver's license for the vehicle concerned. The driver must follow rules pertaining to safe vehicle operation. It is the driver's responsibility to ensure that the vehicle is in a safe condition and to adhere to required maintenance procedures. Personal use of these vehicles is not permitted.

Should an accident occur involving injury or property damage, the circumstances and extent of the loss must be reported to the departmental office as soon as possible after the occurrence.

G. OBLIGATIONS OF STUDENTS SUPPORTED ON GRA or GTA

Students supported on a half-time GRA or GTA are expected to work 20 hours per week, supervised by their advisers. Work schedules are to be arranged with the adviser. Most advisers arrange for meeting with their students on a regular basis to provide for review of progress toward research. Uniform progress is important both for the student's timely completion of thesis/technical report requirements for the M.S. or Ph.D. degrees, and also for formal reports normally required by sponsors of research projects. Students are paid over the period of their degree programs with the implicit understanding that successful completion of their programs involves contributions (such as data collection, analysis of data, summarizing results) leading to completed theses, reports and professional papers. A formal tracking of these research/thesis requirements is accomplished through course credits taken in CB 699 or 799 (and sometimes CB 695 or 795). The adviser/instructor has latitude to assign letter grades for these research credits over a period of semesters, with the full expectation that such research will be satisfactorily completed. An adviser/instructor has complete authority to retroactively change grades given in good faith to U or F if a student fails to satisfactorily complete thesis/report requirements at a later date. All graduate assistants are to be evaluated annually by their advisers, and any problems involving lack of satisfactory progress toward thesis/research requirements will be communicated to the Department Chair, who will take whatever appropriate action is needed to

correct the problems.

Students supported on contract or grant funds will have a half-time work commitment to the project from which they are paid and will generally have additional requirements for their own thesis or dissertation research.

H. ADDITIONAL OBLIGATIONS OF STUDENTS SUPPORTED ON DEPARTMENTAL GRA OR GTA

The following apply to all students who are supported on departmental funds:

1. Graduate teaching assistants are supported on instructional funds and may be required to work up to half time on instructional activities such as paper grading and assisting with laboratory courses. If the instructional assignments are less than 20 hours per week, the remainder is to be spent on research.
2. Any student who is supported on a department GRA will typically be assigned to two (2) classes as a paper grader or laboratory assistant during his or her program of graduate study. The specific semester and assignment will be a function of departmental need and the student's progress in his or her program of study. The duties will be assigned by the Department Chair and will be arranged to minimize interference with research activities to the extent possible.
3. Additional work, beyond that required by the departmental assistantship, will generally be required for completion of the student's own thesis or dissertation research.
4. For students desiring credit for these classroom activities, it is possible to register for CB 784-A Supervised College Teaching. The requirements for credit will be determined by the professor guiding the student and will require the graduate student to take significant responsibility in the presentation of the class. The graduate student will interact directly with students and develop classroom exercises and projects. Grading papers and setting up laboratories are not sufficient activities in themselves to justify credit in Supervised College Teaching.

I. DURATION OF GRA AND GTA FUNDING

Graduate assistantships are generally renewed annually based on satisfactory performance. All graduate students are expected to diligently pursue their respective graduate programs. GRA, GTA or hourly support for students in an M.S. program will normally not exceed two years (24 months) after initiation of the program with all provisional conditions removed. Similarly, financial support for Ph.D. students will normally not exceed three years (36 months) following the start of a Ph.D. program after completion of the M.S. degree. These regulations are necessary to maximize the availability of departmental funding to qualified students for the support of GRA and GTA positions.

However, graduate assistants are classified as "at-will" employees by the State of Colorado, meaning that employment can be terminated at any time. The department will make every effort to assure that students do not lose GRA or GTA support arbitrarily.

J. WORK RULES AND PROFESSIONAL CONDUCT

All graduate students are expected to average a minimum of 20 hours per week spent toward research/thesis effort. However, students should realize that the actual minimum effort is that required for generating acceptable final results. By its nature, research is a process requiring flexibility in the time devoted to achieve the desired end. That is, there is an ongoing learning process involved that typically requires well beyond commitment of the nominal 20 hours per week to complete the thesis/report publication requirements in the allotted periods of one-and-a-half to two years for the M.S. and three years (beyond M.S.) for a Ph.D. program.

During conduct of research, a student interacts with many persons, particularly closely with his/her adviser. This provides an opportunity for students to develop skills in working smoothly with others that will be of importance throughout their future professional careers. Students are expected to conduct themselves in a courteous and professional manner in all their dealings with others, and particularly in their interaction with their adviser. Any problems involving discriminatory/rude behavior or sexual harassment will be dealt with promptly by the Department Chair who will take whatever appropriate actions are needed to correct the problem.

K. STUDY DESKS

A limited number of study desk spaces are available for graduate student use on campus and at the Foothills (ERC and AERC). These spaces will be assigned to students by the Department Chair with the concurrence of the student's adviser. Preference will be given to students on GRA, GTA or hourly funds.

L. MATERIALS AND SUPPLIES

Department policy is that no student should use the copier. Department-supported graduate teaching assistants should submit their course copy requests through the office. As with all copy requests, the larger jobs will be sent to FastPrint, and the smaller ones will be done by office staff. For those graduate students working on research projects, copies should be made at the Morgan Library. Copy cards in any dollar amount from \$1 to \$50 can be obtained by presenting either a DPO or petty cash (both available from department accountant) to CDP Copy Center in the library.

Students are expected to provide their own paper, pens, pencils, transparencies, and other office supplies. Students are not permitted to remove supplies from the departmental office. Copying of materials for personal use must be done in the Lory Student Center, Library, or off campus.

M. PURCHASES

All purchases of supplies and equipment by graduate students must be approved by their adviser and Department Chair in advance and be charged to the appropriate research account. Any purchase made by the student without the proper approval is solely the responsibility of the student.

N. COMPUTER FACILITIES

Through payment of the computing fee, graduate students have access to the College of Engineering computing facilities. If the research contract or student funds do not provide for adequate computing capability, students should confer with their advisers to arrange additional computing access.

O. RESEARCH SUPPORT FOR INTERNATIONAL STUDENTS

Many international students can obtain support for research activities if a proper request is made to the sponsoring organization. Advisers should discuss this possibility with students in this category and take appropriate action to obtain such funds.

P. ATTENDANCE AT PROFESSIONAL MEETINGS

It is desirable for graduate students to participate in professional meetings. Transportation will often be provided by state vehicle for those students wishing to go. Some modest additional support to defray expenses may be provided to students contingent on availability of funds. Preference for department travel funds will be given to students who are presenting papers. These restrictions on travel funds do not apply to those students who can travel on funded projects. International students often have funding within their support programs to pay for travel to professional meetings. All students are encouraged to take full advantage of available assistance to attend professional meetings. Requests for travel assistance must be made well in advance (two to three months) of the meeting and coordinated with the student chapter of ASAE or AIChE.

Q. PUBLICATIONS

It is the responsibility of each and every graduate student, with the assistance of his or her adviser, to write and pursue publication of thesis or dissertation research findings in technical journals, proceedings or other appropriate formats. The expectation is that a Master's thesis will yield at least one refereed publication and a Ph.D. dissertation will yield at least two refereed publications. This publication effort will be performed as part of the normal program of study.

Department funds are not available to support graduate students to write papers after completion of degree requirements. Page charges, where required, may be covered by the department contingent on availability of funds and prior approval by the Department Chair.

R. KEYS

Graduate students will be issued with keys to specific desk spaces, laboratory or work areas. No master keys will be issued to graduate students under any circumstances. Formal key assignments will be made through the department by completion of the university's key authorization form. All keys must be returned as part of the student's final departmental check-out prior to graduation.

S. PARKING

Colorado State University Zone A parking permits will not be issued to graduate students under any circumstances.

T. VACATIONS

Students on half-time GRAs and GTAs are half-time employees of the university and are eligible for two weeks of paid vacation each year, in addition to the 11 paid university holidays.

Students must arrange their vacations with their adviser. Final approval for all vacations must be made by the Department Chair, and appropriate forms must be filed in the main office. It must be recognized that students are expected to be working on their research when classes are not in session unless they are on approved leave.

Students who are not supported on university funds must consult with their adviser for approval of times to be away from campus. The two weeks of approved leave for GRAs and GTAs should be used as a guideline for vacation allowance.

As a guide, any student who expects to be off campus for more than three days should inform his or her adviser of the purpose and location for the duration of the absence.

U. THESIS OR DISSERTATION REQUIREMENTS

The Graduate School requires that two unbound copies of a thesis or dissertation be submitted to the Graduate School as part of the requirements for graduation. In addition, the department requires that the student submit one unbound copy to the departmental office for inclusion in the departmental library. The department will cover binding expense for the department copy, student copy, and adviser copy. It is the responsibility of the student to establish the need for and cover the cost of additional copies of the thesis or dissertation for committee members, funding agencies, sponsors and any other needs as appropriate

It is the responsibility of the student to cover the costs of writing, typing and reproducing his or her thesis or dissertation. All theses and dissertations must meet the standards of format and presentation established by the Graduate School and the Library and must be checked by the department for adherence to those standards. It is the student's responsibility to ensure that his or her thesis or dissertation meets the required standards. All theses and dissertations must be written in SI units.

V. DEPARTMENTAL CHECK-OUT

It is your responsibility to complete a departmental check-out form before leaving the university. The form can be obtained from the department office. All keys must be returned, all desk space must be cleaned up and vacated, all equipment returned, and all work areas must be tidied up. Any samples and chemicals left behind must be clearly labeled. Hazardous waste generated by the student must be turned in to Environmental Health Services before check-out and departure. It is the responsibility of the adviser to ensure that the student leaves his or her work space in a satisfactory condition.

W. GRADUATION

It is your responsibility to complete all paperwork required for graduation, together with the payment of all fees. Please inform your adviser and the department if you plan to attend graduation.

X. COMPLETING YOUR PROGRAM

Remember to keep in touch after you leave campus! Each year we hope to correspond with you and all of our alumni to keep you abreast of developments in the department.