

**GRADUATE STUDIES IN**

**THE COLLEGE OF**

**VETERINARY MEDICINE**

**MS & PhD PROGRAMS**

Policies and Procedures for Graduate Students

*5/9/07*

Note: this manual will be updated occasionally. Please use the most recent update.

## GRADUATE STUDENTS

### **Getting the most out of your graduate program**

As a graduate student you are no longer a spectator in science but you are a key player. The success you will have as a scientist depends on how well you can take the knowledge skills that you have and solve problems using experimental research. It is not only what you know, but more so, how you apply it. Remember you are establishing a reputation and this reputation good or bad will influence your success. Below are some goals to strive for in your graduate degree. Your success in obtaining a position when you leave here will be based on two things- your research experience and on your reputation. Your reputation may be known by your potential employer through direct interaction, but more likely it will be based on letters of recommendation from your major professor and committee. Although you may establish good personal relationships with these people, reference letters and telephone inquiry are professional opinions on your ability as a scientist. Their reputation is at stake and they must give direct, honest answers.

#### **1. Be your own advocate.**

- Know deadlines and requirements, manage your own degree.
- Find ways to attend meetings and present research.
- Sell yourself, your research and your lab, your college.
- Find ways to get experience you want/need. During your graduate program, you can visit other laboratories to learn techniques or get research or diagnostic experience not available at MSU-CVM.
- Join professional societies, attend national and local meetings, participate in student award activities.
- Obtain certifications related to your field.
- If you plan to be faculty, get teaching experience and get critical evaluation from faculty.
- Seek opportunities to apply for competitive funding and writing grant proposals.

#### **2. Work on the characteristics that you will be evaluated on.**

- Enthusiasm- Do you live the work? Do you convey the excitement?
- Hard work- Do you put in more than the minimum? You will likely be given much freedom on how you accomplish your goals. To get the most out of your program, you must be organized, and self driven. Expect to work harder on a routine basis than you did as an undergraduate.
- Persistence- Are you easily defeated by failure? You are performing new research. Expect road blocks. Don't give up.
- Creativity- Do you look at things from traditional view points or do you think creatively? Can you make things work?
- How well you review current literature and apply it.
- How well you pursue methods and information from other scientists.
- How you interact with others.
- Professionalism- respect others (this means all students, staff and faculty), act appropriately in a work environment and at meetings.
- How well you write- do you get the results published? Do you relate it to current knowledge and appropriately indicate the importance of your findings?

- How well you present at meetings and in seminars- Is it well prepared and logically presented? Do you think well on your feet and show that you know the subject matter when asked questions?
3. **It is a small world and impressions count.** You are constantly making impressions that will stay with you for the rest of your career. Many of your fellow students, staff and faculty will be colleagues or competitors for the rest of your career. The impressions you give them can either help you or hurt you. There are no second chances to make a first impression and life is not fair.
- Do not give the impression of carelessness- prepare well and take all oral exams, seminars and presentations seriously.
  - Use safe and careful technique in the laboratory.
  - Maintain good record keeping of research.
  - Give an organized impression- clean orderly lab space, sample storage, office, dress and personal hygiene.
  - Establish cooperative relationships, avoid making enemies- be helpful and understanding of others.
4. **Science is fun!** Your research will be your life, if you don't enjoy it you will not be happy. If you're not happy, why be here? Things go better when you feel good and you have a good attitude.
- The goals mentioned above should be personal goals, do not put so much pressure on yourself that you are unhappy or physically stressed. Enjoy your successes and do not dwell on failures.
  - Expect some defeats. What you are doing is not easy. Do not take defeat personally.
  - Maintain perspective- get physical exercise, proper nutrition and plenty of rest.
  - Be proud of what you are doing and have accomplished. Academia is a very judgmental environment. You are surrounded with over-achievers. Remember you are already a success in making it this far in your education. Don't let judgmental and negative people get you down.
  - Compete with yourself, not others. Competition with others drives negativity and judgmental attitudes that make the work place unfriendly, especially to the person with the negative attitude.
  - Cooperate but do not be used. Science is based on cooperation, sharing ideas and methods but keep your personal goals in mind. Help others where you can but do not do their work for them (of course this does not apply to your responsibilities you have to your lab as a RA).

## **Mission Statement for Graduate Programs of the College**

The Veterinary Medical Sciences and Environmental Toxicology Graduate Programs of the College will provide advanced educational opportunities for students in a board range of biomedical and veterinary sciences. These opportunities provide training for the next generation of scientists and educators who will be leaders in biomedical and veterinary research and education. Our faculty model for our students a passion for learning, collaboration, compassion for animals, sound ethical principles, and critical thinking skills.

## **EXPECTATIONS**

Your graduate education will be much different from your undergraduate and/or professional degree experience. Graduate education should prepare you to become self reliant at finding information, help you become an independent, and a critical thinker allowing you to develop and test original hypotheses.

## **OBTAINING INFORMATION**

The staff in the CVM Office of Research and Graduate Studies (R2000) and your major professor are important sources of information regarding policies and requirements of graduate education at MSU. Besides these sources, other students, college faculty can provide information.

The MSU Graduate Studies Bulletin provides information on regulations and requirements for graduate students. In addition, the bulletin list courses and descriptions. Each semester the university publishes a listing of graduate course offerings prior to registration.

An outline of the specific deadlines and requirements for VMS and ENVTOX graduate degrees and needed forms can be found online at the VMS graduate program web page.

## **RESPONSIBILITY FOR MEETING GRADUATE SCHOOL AND COLLEGE REQUIREMENTS**

It is your responsibility for meeting deadlines for registration, program of study, advisory committee assignments, oral examinations, thesis and dissertation examinations and other MSU Graduate Studies Office published timelines. Advice regarding deadlines should be solicited from the student's advisor, the departmental Graduate Coordinator, the Office of Research and Graduate Studies, and / or the MSU Graduate Studies Office. The deadlines are set to help the student through the process with an appropriate level of guidance. Failure to meet the deadlines jeopardizes the quality of your graduate training and may delay your graduation.

## **ADVISOR AND ADVISORY COMMITTEE**

Your advisor (AKA major professor, thesis director) should be a faculty member who can provide leadership and has expertise in the scientific area that you wish to focus and conduct research. Your advisory committee members should be selected based on their ability to provide assistance in pursuing your research objectives, especially in areas that your major professor cannot provide. The advisory committee members should play a complementary role regarding scientific strengths needed for the research. You must establish your committee early in your graduate education by filling out a committee request form. They will help you establish your course of study (this is done by filling out your program of study). You should maintain contact and provide up-to-date information to the advisory committee to ensure that you progress through your graduate program smoothly. Your committee members are there to help you: do not be afraid of asking for advice or discussing science with them.

The composition of your committee may be changed on rare occasions for a variety of reasons including a change in your research focus, a committee member changing jobs or moving. Also a change in major professor may be necessary (extremely rare, for instance if the major professor leaves MSU). These changes should be made after consultation with the committee and your Graduate Coordinator. Members may not be changed because they have concerns about the quality of your performance.

#### RESEARCH PROPOSAL FOR THESIS OR DISSERTATION RESEARCH

The Veterinary Medical Sciences graduate program offers thesis and non-thesis requiring M.S. Degrees. The VMS and Environmental toxicology Ph.D. degrees both require a research based dissertation. If you are pursuing a research-based degree you will be expected to prepare a research proposal for your thesis/dissertation research. Your research proposal should include a literature review, hypothesis, objectives (specific aims), experimental design, materials and methods, and budget. Students pursuing a doctoral degree should follow the format prescribed by his / her major advisor and advisory committee. The format usually follows that of a federal agency, i.e., USDA-NRI, NIH or NSF. All of the elements for grant applications for these agencies should be included in doctoral dissertation proposals. The thesis / dissertation proposal should be prepared soon after the topic of study has been identified. Generally the proposal should be approved by your committee before 50% of the entire graduate program in years is met. Therefore the dissertation proposal should be presented and approved by your advisory committee by the end of the second year of enrollment.

#### PRELIMINARY/COMPREHENSIVE EXAMS

Preliminary exams are taken by PhD students after they have finished most of the program of study (within 6 credit hours of completion) and have their research proposal approved. The format and schedule of the preliminary examinations are established by your committee members and must include a scheduled oral examination. The request for an oral examination must be submitted to the graduate school at least 1 week before the scheduled examination. You or a committee member may request that the Office of Graduate Studies appoint an outside observer to attend the oral examination. If you fail your preliminary exam you may be allowed to take a second exam at least 4 months later, if you fail a second time you will be dropped from consideration as a Ph.D. candidate. After passing your preliminary you can apply to Admission to Candidacy.

Suggestion: Take the preliminary exam as soon as possible for 2 reasons: 1) your general knowledge will be best soon after taking your classes and 2) preliminary exams are a distraction from doing your dissertation research and writing. As a minimum, your exam must be done by June 1, if you intend to graduate in December, November 1, if you plan to graduate in May, and February 1 if you plan to graduate in August.

#### GRADUATE STUDENT PROGRESS

The requirements for completion of a master's or doctoral degree program are listed in the MSU Graduate Studies Bulletin. A table with specific requirements for CVM graduate programs is available online at VMS Office of Research and Graduate Studies web page. You are encouraged to have frequent meetings with your major advisor and to have advisory committee meetings on a routine basis, at least once per semester (two meetings per year). These meetings will ensure that the advisory committee members are well informed of your progress and can assist you, avoiding unnecessary delays.

If you are not making satisfactory progress toward your degree, you may be dismissed from the graduate program of the college and from MSU Graduate Studies. Prior to dismissal a meeting of you, your graduate committee and the graduate coordinator must be held to discuss grievances/problems and possible remedial plans. However, if the remediation is not successful you will be dismissed from the graduate program.

#### WORK REQUIREMENTS FOR STUDENTS ON STIPENDS

All graduate students receiving assistantships (CVM or grant associated) are required to work an appropriate number of hours per week in addition to the work you do for your degree. The type of work is defined by the type of assistantship you receive. They can be Research, Teaching or Service Assistantships. For example, if you are a half-time RA you are expected to average 20 hours of work per week in the appropriate laboratory beyond what you must do for your degree. (you may work 10 hours one week and 30 hours the next week depending upon the workload in the lab). Therefore, in the latter stages of your graduate education, you will likely spend more than 40 hours per week in the lab. Graduate students receiving assistantships work the same weekly schedule as 12-month employees, i.e. the graduate student only gets the holidays that 12-month employees get.

Graduate students receiving assistantships are not permitted to have other employment. Exception to this rule must be recommended by the major advisor and approved by the Associate Dean for Research and Graduate Studies for all CVM paid assistantships. A graduate student can be granted extended periods of leave (personal or family issues); however, the assistantship will be temporarily terminated during the period of extended leave.

#### SEMINAR AND JOURNAL CLUB

Oral presentations and critical examination of the literature through seminars and journal club participation are critical components in the educational experience of graduate students and an integral part of an academic career. To develop proficiency in the skill of oral presentation, students are required to present seminars and encouraged to present at meetings. Students are encouraged to attend a seminar course each semester they are in residence on the MSU campus. Journal club participation is optional but is strongly encouraged every semester a student is in residence on the MSU campus.

#### ETHICS IN GRADUATE EDUCATION

Scientists face increasing scrutiny regarding professional and ethical behavior. Your decisions as a scientist will have significant impact on your future. Theft of laboratory equipment, plagiarism, and falsifying data are clearly unacceptable. However, other ethical dilemmas will not be as clear cut. You will be expected to adhere to MSU policies of ethical conduct and to follow unwritten rules of proper scientific conduct. There are instances when you may not recognize that there is an ethical component to a decision that must be made regarding the performance of the research or interpretation of data. Your major advisor will help you by discussing issues of ethical conduct that are not readily apparent. If you have an ethical conflict that your major professor can not help you resolve, you should contact other members of your advisory committee and/or the Associate Dean for Research and Graduate Studies. If the issue involves safety or ethical treatment of animals, the Director of Regulatory Compliance can provide confidential guidance. Because of the variety of ethical dilemmas, you are encouraged to take the CVM course titled, Case Studies in Scientific Research Ethics (CVM 8101).

## REGULATORY COMPLIANCE

Research involving animals, particular infectious agents, human subjects (including some surveys), radioisotopes, and hazardous substances must be approved by the appropriate committee working under the auspices of the MSU Regulatory Compliance Office. Forms for requesting approval to conduct these types of research can be downloaded from the Regulatory Compliance web page (<http://www.msstate.edu/dept/compliance>). Forms must be approved by the appropriate committee before any laboratory work can be initiated. Also, graduate students must attend a seminar/presentation and take an exam before they are allowed to work with animals, radioisotopes or hazardous substances. These training sessions must be attended annually.

In addition to federally mandated regulatory compliance guidelines, graduate students are expected to follow and adhere to good laboratory practices and local guidelines.

- Children are not permitted in research laboratories.
- Pets can only be brought into the clinic for treatment. They should not be in any other part of the building.
- Food or drink should be consumed in approved areas only. Consumption of food or drink in laboratories or research hallways is unacceptable.
- Authorization from laboratory supervisor is required before showing others how to use specialized equipment, hazardous substances or handling animals for research.
- Personal protective attire, e.g., laboratory coats, gloves, face shields or eye coverings, and closed toe shoes, should be worn in the lab.
- Protective attire should be worn in research laboratory areas and not in other areas of the building or outside the building (except when collecting samples).
- Doors providing egress from the building must always be in the closed position; do not prop external doors open.
- Do not allow unauthorized access to the building (this includes friends or family members without your accompaniment) or access to labs or equipment. Students from outside of the college of veterinary medicine do occasionally use our facilities but this must be arranged with research faculty on an individual basis. Graduate students may not provide non-CVM personnel access to the building, vehicles, computer facilities, animal facilities, diagnostic or research laboratories.
- Do not perform potentially dangerous research (laboratory or field research) alone.