

Nebraska

UNIVERSITY OF NEBRASKA-LINCOLN



ANIMAL SCIENCE DEPARTMENT

GRADUATE STUDENT MANUAL

REVISED MARCH 05

INTRODUCTION

The purpose of this manual is to provide a summary of procedures and policies of the departmental graduate program. Beginning graduate students are urged to read the manual carefully and then retain it for reference throughout their program. This manual is **not intended to replace the Graduate Studies Bulletin**, which all graduate students should acquire and read before starting and while progressing through their programs. The telephone number for the Office Graduate Studies is 472-2875.

DEPARTMENTAL GRADUATE COMMITTEE

Eight departmental graduate faculty (refer to Major Professor section) constitute the Department Graduate Committee. The chair of the Graduate Committee is appointed by the Dean of Graduate Studies upon the recommendation of the Department Head. The other Graduate Committee members are appointed by the Department Head and represent Animal Breeding and Genetics, Meats, Nonruminant Nutrition, Physiology, Ruminant Nutrition, Outstate Research Centers, and the U.S. Meat Animal Research Center. The Animal Science Department graduate students elect a non-voting student representative to the Graduate Committee. The Committee is listed on page 18 of this manual.

The Committee responds to inquiries from prospective students, handles review of applications and admissions, develops program policies and departmental program coordination, handles student facility assignments, addresses student academic problems, approves doctoral supervisory committees, develops departmental recruiting grants and addresses student concerns. The goal of

the Committee is to develop and maintain excellence in the departmental graduate program. Students should feel free to approach any member of the Graduate Committee with concerns or comments related to their graduate programs.

GRADUATE STUDENT ASSOCIATION

The Animal Science Graduate Student Association (ASGSA) was formed to foster close relationships among Animal Science graduate students and faculty, to encourage leadership, to promote greater interest in the profession, and to promote participation in professional activities. The ASGSA is open to all persons of the Animal Science Department or related disciplines (Agronomy and Horticulture, Veterinary and Biomedical Sciences, Food Science, Nutritional and Health Sciences, Statistics, and Biochemistry) who the membership believes will help to promote the purpose of the ASGSA, and who are currently pursuing an advanced degree.

ASGSA activities include interdisciplinary seminars, fund-raising projects, and social functions, all designed to fulfill the purposes stated above. In addition, eligible ASGSA members may receive travel funds to defray the cost of attending one professional meeting each year and may also receive funds to cover the cost of thesis/dissertation binding. ASGSA eligibility is determined by participating in monthly meetings, fund-raising events, and by paying yearly dues. Students are encouraged to become involved in ASGSA so it can more effectively serve their interests. For more information contact any of the ASGSA officers listed on page 18 of this manual.

MAJOR PROFESSOR (ADVISOR)

Each graduate student must have a major

professor prior to being admitted and initiating graduate study. The major professor works with the graduate student to guide and direct his/her activities and development through the total program. Selection of a major professor is largely a matter between the individual student and an individual faculty member. Factors having a bearing on the selection include finding areas of mutual interest, funding, professor's previous commitments, and student's abilities and goals. The major professor may be changed early in the student's program if it seems desirable and is approved by the Graduate Committee.

M.S. students work with their major professors in developing the total program. Other faculty may be involved in such discussions if desired. Ph.D. students are advised in course work by the major professor prior to program approval by a Supervisory Committee and the Graduate College. During this initial period, major professors will work with Ph.D. students to develop a tentative graduate program and a tentative list of Graduate Faculty to serve on the Supervisory Committee. Once approved by the Graduate Committee and Graduate Studies, it is the responsibility of the student to follow the program developed by the Supervisory Committee.

POLICIES FOR INTERNATIONAL STUDENTS

International students whose first language is not English must take an English proficiency placement test administered by the Department of English before registrations are approved by Graduate Studies. Depending on the results of the examination, the international student may be required to complete additional English courses to gain certification status. Apart from the

English proficiency requirement, international students function in graduate programs on the same basis as their U.S. counterparts. Because evaluation of credentials is not as clear for many international students, they are not eligible for assistantships during the first year at UNL unless they received a degree from an English-speaking institution similar to UNL in educational philosophy and rigor expected of students. **All international students are encouraged to maintain a close liaison with International Affairs, 420 University Terrace, City Campus.**

POLICIES AND GUIDELINES FOR GRADUATE STUDENTS AT DISTRICT RESEARCH AND EXTENSION CENTERS

FACULTY ADVISORS. Graduate students with their major advisor located at research and extension centers will also have an "on-campus" advisor. The "on-campus" advisor will be identified for the student **before** entry into the graduate program. (This procedure will enable graduate students to use their time on the Lincoln campus effectively in course work and research.) During the term of the graduate student's program, the Supervisory or Examining Committee may elect to meet at least once at the research and extension center where the research is being conducted.

TIME ON THE LINCOLN CAMPUS. Students beginning an M.S. program will need to spend at least two semesters in residency on the Lincoln campus, whereas Ph.D. students may need to be in residency on the Lincoln campus three or more semesters to complete course work. The sequence and/or availability of courses approved by the Supervisory Committee will dictate the number of semesters a Ph.D. student will spend on

the Lincoln campus.

SUPERVISORY OR EXAMINING COMMITTEE

M.S. COMMITTEE. Formation of an M.S. Committee to function throughout the student's program in a capacity similar to the Ph.D. Supervisory Committee is optional. With the assistance of their advisor, students identify an Examining Committee composed of at least three Graduate Faculty for approval by the Department Graduate Committee Chair. The M.S. thesis is approved or disapproved by the Examining Committee. **The thesis must be submitted to the Committee at least two weeks prior to the final oral examination.**

Ph.D. COMMITTEE. The Ph.D. Supervisory Committee's purpose is to assist the student in constructing and following a program that will enable professional development compatible with the goals of the student. The Supervisory Committee consists of at least four Graduate Faculty, including the major professor and at least one Graduate Faculty external to the Department of Animal Science. Faculty from other departments with courtesy appointments in the Department of Animal Science cannot serve as the external faculty member. Some degree of diversity in the makeup of the Supervisory Committee is deemed desirable because this committee functions to develop and challenge the thinking of the student as part of the preparation for a diverse, challenging profession. One objective measure of diversity is to include faculty from at least two disciplines of Animal Science.

The major professor assists the student in developing a proposed Supervisory

Committee. The student and major professor will present the suggested Supervisory Committee to the Graduate Committee Chair for approval by the Department Graduate Committee. The student will send an electronic request to the Graduate Committee Chair; the request contains the names of the proposed Supervisory Committee members and how each of these members will help with the program. A brief description of the dissertation topic and the research questions to be addressed must be included in this request. This Supervisory Committee proposal is routed electronically to the Graduate Committee for approval. If one Graduate Committee member wishes, the student and his/her major advisor will meet with the Graduate Committee at their next monthly meeting to discuss and resolve questions related to the makeup of the Supervisory Committee. Once approved, the Supervisory Committee assignment form is forwarded to Graduate Studies. Final appointment of Supervisory Committee members is made by the Dean of Graduate Studies. The major professor serves as Chair. Ideally, the Ph. D. student and her/his advisor should initiate this process during the first semester of classes in the student's program.

Once established, the Supervisory Committee will meet within three weeks of appointment by the Dean of Graduate Studies and before **the student has fewer than 45 hours exclusive of language and/or language tools on their program of studies remaining to be taken.** At this first meeting, the Committee will review and act on the student's proposed course program, research topic, language and/or research tool requirement (research technique or collateral field study), select a Reading Committee for the dissertation, and set the procedure for assessing progress of the student through

the program. In addition to helping develop a pertinent and challenging program, the Committee will provide counsel if problems arise during a student's program. The Committee also functions to ensure the student has reached a satisfactory level of academic and research achievement prior to the conferring of the Ph.D. The decision is made by the Supervisory Committee based on (1) satisfactory completion of a written comprehensive examination and (2) satisfactory completion of a **final oral** examination. In addition, the Supervisory Committee usually will further evaluate a student's performance with an oral examination following the written comprehensive. To strengthen communication between the student and the Supervisory Committee, it is desirable for the Committee to meet periodically to review the student's progress in research and in completion of the courses described in the program of study.

A Reading Committee, consisting of two members of the Supervisory Committee (exclusive of the Chair), will be appointed by the Supervisory Committee. The Reading Committee will approve or disapprove the dissertation once it has the approval of the major professor. **The dissertation must be approved for content and completeness by the Reading Committee at least three weeks prior to the final oral examination.** To meet this three-week time-line, the dissertation must be given to the Reading Committee approximately **five weeks** prior to the expected final oral examination.

Refer to the Graduate Studies Bulletin for further explanation of the procedures.

MEMORANDUM OF COURSES AND PROGRAM OF STUDY

The Memorandum of Courses (M.S.) and

Program of Study (Ph.D.) consist of a description of courses, research activities, and other requirements deemed desirable for completion of the M.S. or Ph.D. program. Departmental minimum program requirements are the same as those established by Graduate Studies. For the M.S. program, there are three options (I, II, and III). Option I is utilized by nearly all students in the Department of Animal Science. Students who use this option must earn a minimum of 30 semester hours of credits consisting of 20 to 24 credit hours of regular course work and present a thesis of 6 to 10 credit hours. Eight credit hours (in addition to the thesis) must be earned in courses open exclusively to graduate students (900 level or 800 level without 400 or lower counterparts). For the Ph.D. program, the minimum amount of graduate credit is 90 credit hours including dissertation. Not fewer than 45 credit hours must be completed at the University of Nebraska. The courses required for the student pursuing the Ph.D. are established by the Supervisory Committee. There is no absolute course work requirement to receive the degree of Doctor of Philosophy. The Department intends programs to be flexible, to build on previous activities, and to meet specific educational objectives of the student. Where specific research interest apply, graduate students are encouraged to take advantage of expertise of faculty members located at research and extension centers, laboratories within Animal Science, and faculty in other departments.

The Memorandum of Courses for the M.S. degree is developed cooperatively by the student and major professor before grades have been received in more than one-half of the program. Thus, the M.S. student and her/his advisor should develop this memorandum no later than early in the student's second semester of classes. Other faculty may be involved if desired.

The Memorandum of Courses must be approved by the Animal Science Graduate Committee Chair and then the Dean of Graduate Studies.

The Program of Study for the Ph.D. degree is developed cooperatively by the student and the Supervisory Committee, usually from a proposal prepared by the major professor and student. The program is submitted to Graduate College for final approval. Changes in both M.S. and Ph.D. programs are permissible and proposals for such changes must be approved in the same manner as described for the original program proposal.

An important aspect of both M.S. and Ph.D. programs is the opportunity to conduct research. At the M.S. level, however, it is possible for the student to take non-thesis options (see Graduate Studies Bulletin), which may be regarded as a terminal program (Option II) or a program to be continued for a higher degree (Option III) rather than the thesis option program (Option I). Options II and III are available to students only by special permission of the Animal Science Graduate Committee. Such permission must be obtained at the time of admission into the program. The research project selected as a part of a graduate program will be one that is compatible with the student's interest and research goals of the major professor. In conducting the research project, the student will plan, execute, and report research.

LANGUAGE AND RESEARCH TOOL REQUIREMENT (Ph.D)

Neither the Department of Animal Science nor the Graduate College has a specific language or research tool requirement (research technique or collateral field study). Any requirement in this regard is

determined by the Supervisory Committee. Each Ph.D. program, as it is developed and approved, must take into consideration and deal with an international language or a research tool as a possible component of the program. Should such an item be included as a program requirement, the Supervisory Committee has the responsibility for establishing guidelines for developing, administering, and examining in the selected international language and/or special research tool.

SEMINARS

Seminars are an important part of graduate education. Seminars provide the opportunity to develop skills in organizing and presenting technical information to a group of peers and to stay abreast of current research in the student's area. This experience is excellent preparation for presenting papers at scientific meetings, extension and classroom presentations, or anytime students are required to speak before a group. **All new graduate students, in either their first or second semester, must enroll in Animal Science Seminar 806, which is offered during the fall semester of each year.** This course is designed to develop the basic skills needed to present a seminar and to help new graduate students become familiar with the faculty and research programs in the Department. **All graduate students are expected to attend and participate in seminars within their discipline, the interdisciplinary seminar in our Department, and seminars sponsored by centers or areas (e.g., Center for Biotechnology) that will enhance their graduate educations.**

EXPECTED STUDENT PERFORMANCE

Graduate students are expected to make

satisfactory progress in course work and research activities at all times. The extent to which progress is judged satisfactory is determined largely by the major professor (with help from the Supervisory Committee for Ph.D. students). Graduate Studies has the following scholarship requirements that must be satisfied to receive graduate credit:

1. A minimum grade of B is required for graduate credit in 800-level courses with 400 or lower counterparts within the student's major department or area.
2. A minimum grade of C or P (Pass) is required for graduate credit in 800-level courses in minor, collateral, or supporting areas of work.
3. A minimum grade of C or P (Pass) is required for graduate credit in 900-level courses, or 800-level courses without 400 or lower counterparts.

Graduate students in Animal Science have further requirements for academic performance:

1. The grade-point average in non-thesis/non-dissertation credits be at least 3.0 for graduation. This average is calculated from courses on the Memorandum of Courses for M.S. students or the Program of Study for Ph.D. students.
2. Non-thesis/non-dissertation credits listed on the Memorandum of Courses for the M.S. or the Program of Study for the Ph.D. may not be taken on a Pass/No Pass basis, unless only offered on a Pass/No Pass basis.

Unacceptable grades will be reviewed by

the Department Graduate Committee. A course of action is developed by the major professor (M.S. or Ph.D) or Supervisory Committee (Ph.D.) and approved before continuing the graduate program.

All graduate students are encouraged to assist with research projects other than their own to broaden their knowledge. The research conducted as part of the Ph.D. and M.S. (thesis option) programs is expected to make a definite contribution of the chosen field, a contribution of sufficient importance to merit publication. All thesis-option M.S. candidates are required to prepare a thesis and Ph.D. candidates are required to prepare a dissertation communicating the results of their research.

PROBATION OR TERMINATION OF A STUDENT'S PROGRAM

Violation of the "Student Code of Conduct" or failure of a student to make satisfactory scholastic requirements, pass comprehensive examinations, or master methodology may result in probation or termination of the student's program. See the **Probation and Termination** section of the Graduate Studies Bulletin.

A student who has been found to have infringed upon the "Student Code of Conduct" policy is ineligible for any Animal Science award.

EXAMINATIONS

GUIDELINES FOR M.S. EXAMINATIONS.

General. Requirements for the M.S. degree are described in the Graduate Studies Bulletin. A written comprehensive examination is required for the M.S. degree. Because of different subject areas and advisors, variation among students in programs and formats of comprehensive examinations will be

normal and is to be expected. The guidelines presented below are not intended to usurp the authority of the major professor and the Examining Committee, but are an attempt to encourage some uniformity within the Department of Animal Science.

A. Written Comprehensive Examination. When a student has substantially completed courses in the program, he/she must pass a written comprehensive examination. This examination must be successfully completed within 10 months, but no less than one week, prior to the final examination.

1. The major professor selects an appropriate set of questions from a pool maintained by the Department or by request to faculty. The pool of questions is updated periodically and is available from the Graduate Committee Secretary in the Department Head's office. The examination will normally contain between eight and 12 questions.
2. The examination should be of a reasonable length. It is recommended that not more than 16 hours cumulative time be allowed to complete the examination. The format of the examination process is left to the major professor.
3. Answers to the questions are to be graded either as Pass or Fail **or** on a numerical scale (0 to 100%) by the faculty members who submitted the questions, each grading their own question(s). Graduate Studies does not have standards for determining a passing grade on the written examination. It is recommended

that a passing grade be 70% of the questions, if graded Pass or Fail, or 70%, averaged over the questions, if assigned numerical scores.

B. Oral Comprehensive Examination. This is not required by Graduate Studies or the Department but may be required by the major advisor. If there is an examination, it is recommended that:

1. The oral examination should be given as soon as possible after the written examination is completed and graded.
2. Answers to the written comprehensive examination questions should be available for review by the Committee.

C. Thesis. The following must be adhered to:

1. Presented to Examining Committee in time to permit review (the **minimum** time is two weeks, one week in the summer).
2. Two copies of the approved thesis and abstract must be filed, after the final examination, in the Office of Graduate Studies. And, one copy must be given to the Department of Animal Science.

D. Time and Place of Final Examination. Final examinations are required for M.S. candidates, and they are open to all faculty. Furthermore, all examinations must be conducted at the scheduled time and place. **A form attached to the Final Examination Report Form is to be completed by the student and forwarded to the Department Office four weeks before the time of the examination. The time and place of the final exam will**

be included in the Animal Science Newsletter or announced by memo to the Animal Science faculty. The Final Examination Report Form must be received in the Office of Graduate Studies at least four weeks (three in summer) before the final examination, and a copy of the thesis must be presented to the Office of Graduate Studies two weeks (one in summer) before the final examination.

- E. **Conduct of Final Examination.** The student may present the results of the thesis in the form of a seminar, but this is not required. Interested faculty, beyond the Examining Committee, and graduate students are welcome at the presentation of the thesis results. Graduate students, plus those faculty not participating in the final examination, are then excused and the examination over the thesis and any other areas deemed pertinent by the Examining Committee (e.g., written examination results) proceeds to conclusion.

GUIDELINES FOR PH.D. EXAMINATIONS

General. Requirements for the Ph.D. degree are described in the Graduate Studies Bulletin. These should be consulted and adhered to by all Supervisory Committees. The Graduate Studies Bulletin states that each Ph.D. student must take a written comprehensive examination, but the format of this examination is left to the Supervisory Committee. Also, at the discretion of the Supervisory Committee, a student may be required to pass an oral comprehensive examination. The Supervisory Committee is responsible for the administration of the entire Ph.D. program within the regulation of Graduate Studies. Therefore, variation among students in programs and formats of

comprehensive examinations will be normal and is to be expected. The guidelines presented below are not intended to usurp the authority of the Supervisory Committee, but are an attempt to encourage some uniformity within the Department of Animal Science. The Supervisory Committee should agree on the examination procedure when they approve the program of study.

A. **Written Comprehensive Examination.** When a student has substantially completed courses in the program, he/she must pass a written comprehensive examination, which may consist of several parts, in major and minor or related fields:

1. The Chair of the Supervisory Committee obtains questions from every member of the Supervisory Committee and from other faculty, where appropriate, to construct an examination specific for each student. The examination will normally contain between eight and 15 questions.
2. The written examination should be completed within a period of one week, but the amount of time for each question, or set of questions, will be left to the Chair and the Supervisory Committee.
3. Answers to the questions are to be graded either as Pass or Fail or on a numerical scale (0 to 100%) by the faculty members who submitted the question(s). Graduate Studies does not have standards for determining a passing grade on the written examination. It is recommended that a passing grade be 80% of the questions, if graded Pass or Fail, or 80%, averaged over the questions, if assigned numerical scores.

B. Oral Comprehensive Examination.

This is not required by Graduate Studies but may be required by the Supervisory Committee. It is recommended that:

1. Oral examinations be held for all Ph.D. students in Animal Science.
2. The oral examination should be given as soon as possible after the written examination is completed and graded.
3. Answers to the written comprehensive examination questions should be available for review by the Committee.
4. In addition to questions related to the field of study, it is recommended that the oral examination include a review of the specific area of research for the dissertation and progress to date.

C. Candidacy. When the student has passed the comprehensive examination and satisfied any language and research tool requirements, the Supervisory Committee recommends to the Office of the Graduate Studies his/her admission to candidacy for the Ph.D. **This report must be filed at least seven months prior to the final oral examination.**

D. Dissertation. The following must be adhered to:

1. Presented to Reading Committee in time to permit review of content and completeness, and approval (suggested time of two weeks).
2. Dissertation must be approved for content and completeness by the Reading Committee.

3. **Two copies of the approved dissertation, abstract, and application for final oral examination must be filed in the Office of Graduate Studies at least three weeks before the final oral examination** (usually a shorter period, e.g., two weeks, is permitted in the summer). This means that the initial presentation to the Reading Committee (item D.1.) must normally be at least *five weeks* before the final oral examination. And, one copy must be given to the Department of Animal Science.

E. Time and Place of Final Examination. Final examinations are required for Ph.D. candidates. They are open to all faculty. Furthermore, all examinations must be conducted at the scheduled time and place. **A form attached to the Final Examination Report Form is to be completed by the student and forwarded to the Department Office four weeks before the time of the examination. The time and place of the final exam will be included in the Animal Science Newsletter or announced by a memo to the Animal Science faculty. The Final Examination Report Form and a copy of the dissertation and abstract are due in the Office of Graduate Studies at least three weeks prior to the final examination.**

F. Conduct of Final Examination. The student may present the results of the dissertation in the form of a seminar but this is not required. Interested faculty, beyond the Supervisory Committee, and graduate students are welcome at the presentation of the dissertations results. Graduate students, plus faculty not wishing to

stay for the defense of the dissertation, are then excused and the defense of the dissertation proceeds to conclusion.

GRADUATE STUDIES FORMS AND DEADLINES

All of the following forms are available from the Graduate Committee Secretary in the Department Head's office. Many are available at the Graduate Studies website (www.unl.edu/gradstud/).

M.S. PROGRAMS. M.S. candidates must complete three forms, which are to be submitted by specified dates:

1. "Memorandum of Courses Required for Candidacy for the Masters Degree" must be received at Graduate Studies before the completion of no more than one-half the program. (This form is available on the web.)
2. "Application for Degree" must be filed in the Records Office, 107 Administration, before the end of the third week of classes in the semester of graduation.
3. "Final Examination Report for Masters Degree" must be received in the Graduate Studies Office at least *four weeks* prior to the date of the oral examination. (This form is available on the web.)

PH.D. PROGRAMS. Ph.D. candidates must complete five forms, which are to be submitted by specified dates:

1. "Appointment of Supervisory Committee for the Doctoral Degree" should be filed during the first semester of the Ph.D. program. (This form is available on the web.)

2. "Report of the Supervisory Committee on Program of Studies for the Doctoral Degree" must be submitted to Graduate Studies before 45 hours, including the hours from the M.S. program, have been completed. (This form is available on the web.)
3. "Application for Admission to Candidacy for the Doctoral Degree" must be completed after the student has passed the comprehensive examination (and completed his/her language and research tool, if required). This report must be filed at least *seven months* prior to the final oral examination. (This form is available on the web.)
4. "Application for Degree" must be filed in the Records Office, 107 Administration, before the end of the third week of classes in the semester of graduation.
5. "Application for Final Oral Examination or Waiver of Examination for the Doctoral Degree" must be received at least *three weeks* prior to the date of the final oral examination.

Further details about these forms and procedures can be found in the Graduate Studies Bulletin.

THESIS AND DISSERTATION

Most M.S. candidates complete a thesis (Option I) and all Ph.D. candidates complete a dissertation. Specifics concerning the organization, preparation, and due dates of thesis or dissertation are published in the Graduate Studies Bulletin and the "Guidebook for Preparing Thesis or Dissertation" available from UNL

Graduate Studies. If there are additional questions regarding the form or style to use, it is suggested students follow the form and style used by the refereed journal in their area (i.e., Journals of Dairy, Poultry, Food, and Animal Science). The Graduate Committee Secretary in the Department Head's Office has a listing of the deadline dates and a check-out copy of the preparation guidebook. The Department requires one unbound copy of the thesis or dissertation which the Department will bind to place in the Department Reading Room. It is customary to provide the major professor with a complimentary bound copy of the thesis or dissertation. Two unbound copies of the thesis or dissertation and two copies of the abstract (and two extra copies of the title page for dissertations) must be provided to the Office of Graduate Studies to be placed in the library. Students will be assessed a binding fee for the copies that are placed in the library, and dissertations also have a fee microfilming and for publication in *Dissertation Abstracts International*.

STATUTES OF LIMITATION

M.S. PROGRAMS The work required for the M.S. degree must be completed within ten consecutive years. No courses can be revalidated after the 10-year period.

PH.D. PROGRAMS. The time limit on the doctoral program is eight years from the time the student's Program of Study is filed in the Graduate Studies Office. There are no waivers and there are no revalidation procedures.

PROGRAM MAINTENANCE REQUIREMENTS

Graduate assistantships require registration for at least nine hours during each spring and fall semester and at least

one hour in each of two summer sessions. Most fellowships require maintenance of full time status (nine hours each semester and six hours during summer with at least one of the six in each of two sessions, preferably the eight-week and second five-week session). With approval of the Dean of Graduate Studies, students in the final semester of an M.S. degree or candidates for the Ph.D. degree may hold full-time status and be registered for fewer credit hours during the fall and spring semesters. A form "Certification of Full Time Graduate Status," must be submitted to request the Dean's approval. Enrollment in the summer means graduate students will have to pay for registration fees twice. Some students may need to register for more credit hours during the summer to meet specific requirements (e.g., those set by health insurance or educational loan companies). Besides keeping full-time status, registering for the summer hours avoids deducting Social Security payments from payroll checks during the summer. It is usually cheaper to register for the hours than to pay Social Security. Doctoral students **must** register for at least one credit hour each semester after becoming a candidate for the doctoral degree. Graduate students are urged to read the **Graduate Student Registration** section of the Graduate Studies Bulletin regarding employment guidelines and full-time student status.

RESEARCH ASSISTANTSHIPS, TEACHING ASSISTANTSHIPS, AND OTHER APPOINTMENTS

Responsibilities. Research assistants, teaching assistants, fellowship recipients, and other funded and nonfunded graduate students are **directly** responsible to their major professor and are all expected to reach or surpass the same level of competence acceptable in

their field to receive their advanced degree. Graduate students are given the opportunity, and are expected, to assist with research projects other than their own. Teaching assistants are responsible to the faculty member in charge of classes and are expected to help with lectures, laboratory sessions, grading papers, and preparing teaching aids. See the UNL Animal Science Teaching Assistant Guidelines. Attempts will be made to provide opportunities for all Ph.D. students and some M.S. students to gain teaching experience. **Graduate students receiving a regular assistantship cannot be employed in any other position.**

Length of Assistantship. The usual term of an assistantship is two years for the M.S. degree and three years for the Ph.D. Extensions may be granted, given satisfactory progress in the student's program.

Hours. The amount of time spent per week on a student's research, working on other departmental research, attending classes and on other activities will vary considerably. Students employed in permanent departmental positions will have percentage equivalent of full-time appointments stated on their Personnel Action Form. A student receiving a regular assistantship has a 20-hour weekly time commitment (beyond class attendance) to the Department. All graduate students are encouraged to spend as much time as possible in the Animal Sciences building and in departmental activities.

Vacation and Leave. All vacations and leaves must be planned in advance and approval obtained from major professors. There are many times when a student's presence is absolutely necessary for the proper conduct of research. Conflicts can be avoided by careful and advanced planning. School breaks such as

Christmas, Thanksgiving, and Spring Break are work periods, except for days declared as official University holidays. When going on vacation or leave, a telephone number and/or address should **always** be left with the advisor's secretary.

Health Programs. Graduate students who are certified by the Office of Graduate Studies as full-time students and who pay the health fee are eligible for student health services. Eligibility continues only as long as students are registered. However, if students are not enrolled during the summer but can show intent to be enrolled in the fall term, they may obtain health services by making application to the Health Center and paying a prorated share of the annual fee.

Employee health benefit insurance programs are not available through the University as a result of receiving an assistantship. However, graduate students are eligible for a group student health insurance program through a private company. Information on such programs will be available at the time of registration and/or through the University Health Center.

Tax Information and FICA. Graduate assistantships are taxable income. Payment of FICA can be avoided by registration for at least nine credit hours per semester (or one credit hour with an approved waiver, see Program Maintenance Requirements, page 10) and three credit hours spread over two summer sessions including at least one of these hours in each of two sessions (preferably the eight-week and second five-week sessions). The W-4 form is completed at the beginning of employment.

Tuition and Tuition Waiver for Students Receiving an Assistantship. A

graduate student receiving a teaching or research assistantship will qualify for a waiver of up to 12 hours of resident tuition during each semester if the appointment is continuous and for four full months within the semester dates. Resident tuition rates would be charged to the student for credits in excess of 12 hours. **If a student resigns or terminates the assistantship during the semester before four full months are served, all tuition benefits are lost, and the student will be responsible for that semester's tuition payment.** Graduate assistants will also receive tuition waiver for the first 12 hours during summer sessions. **Students are responsible for paying their University Program and Facility Fees (UPFF) for academic semesters and summer sessions.**

GRADUATE STUDENT TRAVEL POLICY

Students Presenting Papers. Graduate students who are presenting their research at professional meetings will be eligible to receive reimbursement of least cost transportation, registration fees, and lodging, meal and miscellaneous expenses allowed under state and university policy. All travel must be approved on the standard travel authorization form. The Department will provide a maximum of \$100 toward registration fees, lodging, and meals. The balance of expense reimbursement will be the responsibility and at the discretion of the student's major professor from grants or other funds available to the major professor.

Students Not Presenting Papers. Graduate students who attend professional meetings but are not presenting papers are eligible to receive reimbursement at the discretion of the major professor and from grant or other flexible funds available to the major professor. All students must be covered

by a travel authorization form, regardless whether or not there will be expense reimbursement.

DATA AND RECORDS

All data and records pertaining to the research activities are the property of the Department of Animal Science. The same applies to other items such as photographs, transparencies, microscopic slides, specimens, models, and computer programs that might have been developed as a part of the graduate activities. Students desiring copies of any of these items may have them duplicated at their own expense if such duplication is mechanically feasible, and provided there are no copyright agreements prohibiting such duplication.

PUBLICATION AND PATENTS

In addition to preparation of a thesis and/or dissertation, all students are strongly encourage to prepare manuscript(s) of their research results for publication and/or presentation at scientific meetings. The student will gain valuable experience from the efforts that go into publishing results and presenting scientific papers. The student and major professor work closely on such efforts. Any release of such material must be approved by the major professor, the Department Head, and the Dean of the Agricultural Research Division.

There may be cases where graduate student research efforts lead to patentable discoveries. The Board of Regents encourages seeking patents on discoveries as a method of bringing recognition and remuneration to the individuals involved and to the University. Final approval within the University involves the Board of Regents. The Bylaws of the Board of Regents of the University of Nebraska

provide additional information about patents. Graduate students may work on proprietary research. However, the size of commitment to proprietary research should be limited, allowing the student adequate time to complete the research published in the thesis or dissertation, which stands alone in fulfilling this portion of the requirement of the M.S. or Ph.D. degree.

DEPARTMENTAL SERVICES, FACILITIES AND SUPPLIES

Graduate students need to work, to various degrees, with secretaries, laboratory technicians, managers, and other support staff in pursuing a graduate program. At times, students need to use departmental supplies, equipment, and facilities to accomplish the goals of the graduate program. It is departmental policy that graduate students must gain the approval of major professors when departmental supplies or services are needed.

Personal computers (many with internet access) are available in the Computer Lab (A222) and the Graphics Room (A220) for graduate student use. **The secretarial computers, laser printers, and typewriters are not to be used by graduate students.** Students needing typing done should go to their advisor who will take the work to the secretary. A secretary is not obligated to do work not authorized by advisors.

Laser Printer. Available to Animal Science faculty, staff, and graduate students for generation of text and graphics. Graduate students may use the laser printer for a charge of 5¢/page. Large jobs should be scheduled with a reservation sheet or printed during off

hours. Work-related jobs have priority during office hours.

Photocopier. The Xerox copier in A220 is available for graduate students. Students must get a code from the Animal Science business office (C203) to gain access. Other photocopiers are **not** to be used by graduate students. Students needing work-related copies should go to their advisor who will take the work to the secretary. Copies that are not for departmental research or for departmental teaching are 5¢/page for photocopying.

FAX Usage. No personal FAX messages can be sent from the Department. Since the university has tax-exempt status, the State of Nebraska does not allow personal use of the FAX machines. All work-related FAX messages must be sent by the suite secretaries.

Office Supplies. All office supplies should be requested through the suite secretaries.

Graphics Room - All computer equipment in C206h is to be reserved through a suite secretary and only to be used for slides, posters, and scanning. Graduate students may not use this equipment to **prepare** their presentations.

MISCELLANEOUS INFORMATION

Building Pass and Keys. New graduate students should go to the Department Office (C203) as soon as possible to obtain a building pass and building keys. Graduate students are expected to have a building pass in their possession to present to security personnel upon request whenever they are in the building after regular hours. A deposit for key(s) is required and will be refunded upon return of the key(s). Students must return keys when they finish their programs. Student

should secure their personal belongings when they are in the building and remember to lock all doors during non-business hours.

Parking and Vehicle Registration.

Students planning to park vehicles on campus are required to register the vehicle(s) and obtain a parking permit. Permits can be purchased from Parking and Transit Services, Stadium Drive Parking Garage, City Campus. A pamphlet describing the parking lots available and the University traffic rules and regulations will be given with the parking permit. Students are not eligible to park in faculty/staff lots.

University Vehicles.

University vehicles are available when transportation is needed for research purposes or other official University business. Approval is required from the major professor for all university vehicle usage. For insurance purposes, graduate students who are not on the University payroll need to obtain a travel authorization before driving a University vehicle. A valid driver's license is required for all graduate students driving a University vehicle. Drivers and passengers of University vehicles must use seat belts. In case a student is at fault in an accident, the insurance covers expenses to other person(s) involved (if proper authorization is received) but expenses to repair or replace the University vehicle are paid, at least in part, by the Department. If there is an accident, non-University personnel are not covered by insurance.

Desk and Locker. Shortly after a student's arrival, the major professor and/or the Chair of the Department Graduate Committee will locate a desk for the student. As other people leave, students have the option of changing desks. Locker space is available. Students needing a locker should contact

Clyde Naber (C203) or Dr. Roger Mandigo (A213). Students should check with secretaries to see where their mail will be placed.

Loans. Students wishing to borrow funds for college expenses can inquire at the office of Scholarships and Financial Aid, 16 Administration Building, City Campus. This office does not participate in the granting of fellowship or assistantships but does maintain current information on all other forms of available financial aid.

Bicycles. Bicycles are **not** to be stored in the Animal Sciences building. Bicycle racks are located at entrance points to the building. Be sure to lock your bicycle securely to prevent theft.

Additional Reading. (Available in the Animal Science Department Office)

Bylaws of the Board of Regents of the University of Nebraska
 Bylaws of the University of Nebraska-Lincoln
 Employee Handbook
 Graduate Studies Bulletin
 Schedule of Classes
 Guidebook for Preparing Thesis or Dissertation

DEPARTMENT OF ANIMAL SCIENCE GRADUATE FACULTY

Don C. Adams, Professor, Ph.D., New Mexico State, 1980. Ruminant nutrition: beef/range systems.

Kathleen P. Anderson, Associate Professor; Ph.D., Kansas State, 1991. Reproductive/growth physiology, equine management.

Mary M. Beck, Professor; Ph.D., Maryland, 1980. Avian physiology: CNS development; cerebral energy metabolism; thermal and photic

effects on brain function.

Don H. Beermann, Professor and Head; Ph.D., Wisconsin, 1976. Muscle biology, growth physiology and growth regulators; meat science.

Dennis R. Brink, Professor; Ph.D. Kansas State, 1978. Ruminant nutrition; mineral nutrition of beef cow.

Michael C. Brumm, Professor; Ph.D., Purdue, 1978. Swine management and housing: feeder pigs stress management, weaned pig environmental requirements.

Dennis E. Burson, Associate Professor; Ph.D., Kansas State, 1984. Meat science.

Chris R. Calkins, Distinguished Professor; Ph.D., Texas A&M, 1981. Meat science: fresh meats research and teaching, muscle characterization, palatability, flavor, tenderness, quality and consistency of meat, carcass composition.

Andrea S. Cupp; Assistant Professor; Ph.D. Nebraska, 1994. Reproductive Physiology/Beef Physiology: Regulation of Fetal Testis and Ovarian Development; Regulation of Ovarian Follicle Development and Ovulation.

Galen E. Erickson, Assistant Professor; Ph.D., Nebraska, 2001. Ruminant nutrition: Byproduct utilization, nutrition and environment interactions, grain processing, acidosis, and protein nutrition.

Rick N. Funston, Assistant Professor; Ph.D., Wyoming, 1993. Beef reproduction, estrus synchronization, beef management.

James A. Gosey, Professor; Ph.D., Nebraska, 1976. Beef breeding and management.

Rodger K. Johnson, Professor; Ph.D., Oklahoma State, 1973. Swine breeding: genetic and physiological effects on puberty, ovulation rate, embryo survival, uterine capacity and litter size; methods of selection.

Steven J. Jones, Associate Professor; Ph.D., Purdue, 1984. Meat science: growth and development of meat animals; protein synthesis, degradation and accretion.

Jeffrey F. Keown, Professor; Ph.D., Cornell, 1972. Animal breeding: dairy cattle management, analysis and use of Dairy Herd Improvement records.

Terry J. Klopfenstein, Distinguished Professor; Ph.D., Ohio State, 1965. Ruminant nutrition: protein nutrition, forage feeding, and systems of production.

Richard K. Koelsch, Associate Professor; Ph.D., Cornell, 1992. Livestock environmental issues; livestock system nutrient management systems.

Paul Kononoff, Assistant Professor; Ph.D., The Pennsylvania State University, 2002. Dairy nutrition: forage and fiber quality effects on milk production and rumen fermentation, ruminant feed chemical composition and particle size analysis.

Larry L. Larson, Associate Professor; Ph.D., Kansas State, 1968.

Dairy physiology: reproductive management of dairy cattle; influence of nutrition on reproduction.

and reproduction, and applications to biomedicine and to genetic improvement of food producing animals.

Terry L. Mader, Professor; Ph.D., Oklahoma State, 1981. Ruminant nutrition: growth promotants; utilization of silage additives; environment and shelter for feedlot cattle.

Rick J. Rasby, Professor; Ph.D., Oklahoma State, 1986. Cow-calf management systems; nutritional effects on reproductive performance of beef cows.

Roger W. Mandigo, Professor; Ph.D., Oklahoma State, 1967. Meat science: manufacturing and processing fresh meat; cured and smoked meats; emulsions, ingredients, thermal processing; and processing interventions for food safety.

Duane E. Reese, Associate Professor; Ph.D., Nebraska, 1983. Swine nutrition.

Bryan Reiling, Assistant Professor; Ph.D., Illinois, 1996. Livestock evaluation, livestock management, ruminant nutrition, youth programs and teaching.

Phillip S. Miller, Professor; Ph.D., California-Davis, 1990. Swine nutrition: nutritional constraints of lean growth; nutrition's effects on organ and tissue growth.

Ivan G. Rush, Professor; Ph.D., Oklahoma State, 1974. Beef nutrition and management; processing of corn for growing-finishing cattle; low quality roughages and winter supplementation for cows, supplementation for the grazing yearling.

Jess L. Miner, Associate Professor; Ph.D., University of Missouri, 1989. Nutritional biochemistry: adipose metabolism, inhibition of ruminal methanogenesis.

Sheila E. Scheideler, Professor; Ph.D., Iowa State, 1986. Poultry management and nutrition: calcium metabolism and shell quality; incorporation of healthy nutrients into the egg for human consumption.

Merlyn K. Nielsen, Professor; Ph.D., Iowa State, 1974. Animal breeding: selection for litter size and lower energy requirement in mice; improvement of beef cattle through breeding methods.

Rosie Nold, Associate Professor; Ph.D., South Dakota, 1997. Youth programs, meat science.

Stowell, Rick; Ph.D., Michigan State University 1997. Livestock housing systems and facilities, and animal environment, especially as related to thermal stressors.

Daniel H. Pomp, Professor; Ph.D., North Carolina State, 1989. Animal genomics: gene discovery for complex traits such as obesity

L. Dale Van Vleck, Professor and

Research Geneticist, ARS; Ph.D., Cornell University, 1960. Animal breeding: methods for genetic improvement of economically important traits of domestic animals.

John S. Weber, Assistant Professor; Ph.D. University of Michigan, 1996. Mammalian genomics and molecular biology: mutagenesis and chromosome engineering to determine gene function; identify pathways important in immunity, lactation, growth and reproduction.

Brett R. White, Assistant Professor; Ph.D., Illinois, 1997. Swine physiologist. Transcriptional regulation of the porcine gonadotropin-releasing hormone (GnRH) receptor gene; gene expression during early embryonic development in mice and pigs; gene expression in nuclear transfer embryos; development of transgenic animal models.

ADJUNCT GRADUATE FACULTY

Gary L. Bennett, Adjunct Professor and Research Leader; Ph.D., Ohio State, 1977. Production systems an animal breeding: computer models, linkage analysis, selection.

Ronald K. Christenson, Adjunct Professor; Ph.D., Missouri, 1970. Swine reproduction: physiology of puberty, ovulation rate, embryo survival, uterine capacity and litter size.

Larry V. Cundiff, Adjunct Professor; Ph.D., Oklahoma State, 1966. Beef cattle breeding, germplasm

evaluation and utilization, heterosis.

Calvin L. Ferrell, Adjunct Professor; Ph.D., California-Davis, 1975. Beef nutrition, energy utilization in beef cattle.

J. Joe Ford, Adjunct Professor; Ph.D., Iowa State, 1972. Swine reproduction: ovarian function.

Thomas G. Jenkins, Adjunct Professor; Ph.D., Texas A&M, 1977. Production systems: factors influencing biological production efficiency in cattle and sheep.

Mohammad Koohmaraie, Adjunct Associate Professor; Ph.D., Oregon State, 1984. Muscle biology: regulation of muscle protein degradation during growth and postmortem storage.

Kreg A. Leymaster, Adjunct Professor; Ph.D., Ohio State, 1977. Swine and sheep breeding: selection for components of litter size in swine; development of dam and sire breeds for terminal crossbreeding systems in sheep.

Donald D. Lunstra, Adjunct Professor; Ph.D., Purdue, 1974. Male reproductive physiology: testis function, puberty, fertility, sexual behavior.

C. Todd Milton, Adjunct Professor; Ph.D., Nebraska, 1996. Feedlot nutrition.

Thomas A. Rathje, Adjunct Assistant Professor; Ph.D., Nebraska, 1995. Swine breeding and genetics.

Gary A. Rohrer, Adjunct Professor;

Ph.D., Texas A&M, 1991.
Molecular genetics: swine genetic
map, swine breeding.

Ricky A. Stock, Adjunct Professor; Ph.D.,
Nebraska, 1982. Feedlot
nutrition.

Vincent H. Varel, Adjunct Associate
Professor; Ph.D., Illinois, 1977.
Rumen, gastrointestinal and
waste management microbiology.

COURTESY GRADUATE FACULTY

Timothy P. Carr, Associate Professor;
Ph.D., Arizona, 1989. Human
nutrition; sterol and lipoprotein
biochemistry; animal models of
atherosclerosis; functional food
development.

Walter W. Stroup, Professor; Ph.D.,
Kentucky, 1979. Statistics:
design and analysis of
experiments; linear models,
including mixed and generalized
models; categorical data.

Michael G. Zeece, Professor; Ph.D., Iowa
State, 1984. Muscle protein food
technology.

Janos Zempleni, Assistant Professor;
Ph.D., Giessen, Germany, 1992.
Nutrition.

2004-2005 ANIMAL SCIENCE GRADUATE COMMITTEE

Jess Miner, Chair
Terry Klopfenstein (Ruminant Nutrition)
Tom Jenkins (MARC Representative)
Rodger Johnson (Breeding & Genetics)
Steve Jones (Meats)
Terry Mader (District Programs)
Sheila Scheideler (Nonruminant

Nutrition)
Brett White (Physiology)
Graduate Student Representative

Secretary for Graduate Committee - Deb
DeWald, C203 Animal Science

2004-2005 ANIMAL SCIENCE GRADUATE STUDENT ASSOCIATION OFFICERS

President - Jennie James
Vice-President - Jason Scheffler
Secretary - Dawn Sherwood
Treasurer - Becky Bott
Sergeant-at-arms - Ryan Gordon

Senior Advisor - Galen Erickson
Junior Advisor - Ted Doane