DEPARTMENT OF ENTOMOLOGY

University of Nebraska Lincoln



RESIDENT GRADUATE STUDENT HANDBOOK

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https://entomology.unl.edu

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The Information in this handbook and other University catalogs, publications, or announcements is subject to change without notice. University offices can provide current information about possible changes.

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General Introduction

Welcome to the Department of Entomology at the University of Nebraska! This handbook has been prepared to introduce new or prospective students to the Entomology Department. It is a guide to graduate admission information and program procedures. After stating the departmental philosophy toward graduate education and expectations for students beyond class work and research performance, the handbook provides a brief introduction to our community and the department's history. Information about departmental facilities, financial assistance, and University health services is also provided in this book. The composition and role of the graduate committee and M.S. and Ph.D. supervisory committees follow. Graduate students should review the requirements for the M.S. and Ph.D. degrees. The end of this handbook contains the graduate student annual report form and a list of awards and fellowships available to Entomology graduate students.

Graduate Admission Information and Program Procedures

Overall procedures and policies in the Department of Entomology comply with those established by the University of Nebraska's Office of Graduate Studies. However, in some cases, department requirements may be more stringent than those of Graduate Studies.

Students seeking admission to the M.S. or Ph.D. program must hold at least a B.S. or B.A. degree from an accredited college or university. Baccalaureate course work must include the prerequisites of chemistry, mathematics, biology, and introductory entomology; however, admission is possible with the missing course work noted as a "deficiency." A grade of C or better is required for all prerequisites. An undergraduate level statistics course will not fulfill the college-level mathematics prerequisite. A limited number of deficiencies may be made up during the graduate program, typically during the first year, and these deficiency courses may not count toward the program of study.

Submit the following to the Office of Graduate Studies:

- Application for Graduate Admission
- $50 non-refundable application fee
- Transcripts showing a bachelor's and/or master's degrees from accredited colleges or universities, uploaded to the graduate application system, which is currently Admit by CollegeNet (see upload requirements). All previous official transcripts are required upon acceptance to UNL.
- *If your native language is not English:* verification of English proficiency.

Submitting the Application for Graduate Admission begins a series of actions and communications for each application. Applicants should type or upload all information, documents, and materials electronically. References should sign in to Admit and upload their Letters of Reference.

An application must be complete (including Letters of Reference) before the four-member Department of Entomology Graduate Committee reviews the file to determine if the applicant meets admission requirements. If a resident applicant is acceptable, the committee circulates information about the applicant to the entire faculty. The resident applicant is accepted into the graduate program *only* if a faculty member agrees to serve as an advisor. Faculty must have adequate resources to cover research expenses. Many qualified applicants are not accepted because faculty have limited resources and can only advise a limited number of students.

Minimum Entrance Requirements

Graduate Certificate in Entomology – Undergraduate GPA of 3.0 or better. A GPA of less than 3.0 will be considered on an individual basis for provisional admission.

M.S. – Undergraduate GPA of 3.0 or better - Full Graduate Standing. A GPA of less than 3.0 will be considered on an individual basis for provisional admission. Provisionally admitted students must earn a B or better in their first 9 credit hours of graduate entomology courses. Provisionally admitted students may have their admission revoked if they do not meet the academic standard set in their provisional admittance. Once the provisional admittance requirement is met, students will be given full graduate standing.

Ph.D. – With a few exceptions, the M.S. Degree is required. The Graduate Committee does not normally admit B.S. students directly into a Ph.D. program; however, each applicant will be considered on an individual basis.

International Students – A minimum TOEFL score (internet-based – 70 or paper-based —523 composites) is required by Graduate Studies.

Students applying for admission to the Department of Entomology are encouraged to submit Graduate Record Examinations (GRE) scores. Although the GRE is not an absolute departmental requirement, it may be a factor in influencing a faculty member's decision to accept a resident student into their graduate program. The decision to accept a qualified applicant resides with the faculty member who wishes to become responsible for directing that student's program. In the event no faculty member accepts responsibility for a prospective student, the student is denied admission.

DEPARTMENTAL PHILOSOPHY TOWARD GRADUATE STUDENTS

The Department of Entomology regards graduate education as one of the most important activities undertaken by the department. We are dedicated to producing highly trained, motivated, and successful certificate, M.S., and Ph.D. students. Faculty strive to provide an environment in which students can reach their potential as individuals and professionals. To this end, we recognize graduate education must encompass many experiences in addition to course work. Resident graduate degrees in entomology are research degrees; consequently, it is important to learn research skills and gain experience in conducting research. At the M.S. level, the emphasis will be on learning the basic skills of scientific research and

implementing a research protocol. At the Ph.D. level, the understanding of research will be significantly greater, and original research in which the student assumes a significant intellectual role is expected.

In pursuing these goals, the department recognizes that there are several other activities that will aid professional development beyond course work and research experience. Our philosophy is to regard graduate students as apprentices in the practice of science. As apprentices, it is important that students can participate in the broad range of activities that are conducted by professional scientists. We strive for not only growth in factual knowledge and research skills but also a broader intellectual growth. By this we mean the ability to analyze and critique published research and to develop insights and understandings into novel findings. We also expect students to grow in interpersonal skills and, as appropriate, engage in team science. We expect professional growth to occur through interactions with the major professor, fellow graduate students, and other faculty and staff in the department. The greater the breadth of graduate experience, the greater the potential for professional growth.

EXPECTATIONS

The specific expectations regarding classwork and research performance are described elsewhere in the handbook. It is important to note that as a member of the department, we have expectations beyond classes and research. One expectation is that you are an active member of the department. Faculty members encourage student participation in a variety of formal and informal activities, such as attending seminars, participating on committees, assisting with public outreach and extension events, and joining student organizations. Involvement in these activities will contribute to a student's future career success through professional development.

When we speak of graduate school as an apprenticeship, we recognize that for such an apprenticeship to be successful there must be careful mentoring of graduate students. Entomology professors and staff regard graduate student mentoring as among their highest priorities. A student will be mentored by a major professor and secondarily through members of their supervisory committee, and the student is expected to engage regularly through meetings and written communications. Professional growth will include interactions with other professors and associations with fellow graduate students in Entomology and other departments. We encourage students to engage with the research community relevant to their project early in their graduate student program.

As a student progresses through the graduate program, several experiences and opportunities will present themselves. Students routinely attend scientific meetings where they present research papers and posters and give seminars in other departments. Students are encouraged to assist in teaching courses, participate in extension workshops, make presentations in local elementary and high schools, and otherwise contribute to the overall research, teaching, and extension/outreach enterprise of the department. These experiences build students' skills and résumés. Excellence of graduate student achievements can be recognized in many ways. Opportunities include such things as travel grants to scientific meetings, fellowships, scholarships, honorary societies, and teaching and research awards both on campus and through the Entomological Society of America (ESA). Our hope is that students will take advantage of these recognition opportunities during their tenure as graduate students in the department.

Ultimately, students must take responsibility for their own graduate education. They are responsible for ensuring that they meet departmental and Office of Graduate Studies' deadlines and requirements for their degree. Although meeting these requirements is important, it is not all that students should gain

from their graduate experience. We will provide other opportunities for growth, but the student must be prepared to pursue these opportunities and their associated responsibilities and obligations. The professors, staff, and fellow graduate students in the department are willing and eager to work with the student to have as successful a graduate experience as possible. We look forward to having students entering the department as apprentices and leaving as colleagues.

COMMUNITY

Nebraska is in the east-central region of the Great Plains. Bounded by the Missouri River on the east, the state offers a variety of scenery from the farming area in the east to the rolling Sandhills and the mountainous areas of the Wildcat Hills and Pine Ridge in the western Panhandle. Nebraska offers a wide variety of outdoor, year-round activities – check out the Nebraska Games and Parks Commission website. Lincoln, the capital of Nebraska, has a population of approximately 289,000 (2020 census) and offers some of the finest cultural, historical, and recreational opportunities in the region.

The University of Nebraska-Lincoln is Nebraska's largest educational institution (often called the "flagship institution"). Founded as a land-grant university in 1869, UNL's primary mission has three aspects: teaching, research, and extension. UNL also has a vibrant arts & culture community and various athletic programs. The Sheldon Museum of Art and Outdoor Sculpture, Kimball Recital Hall, Temple Building, University of Nebraska State Museum Morrill Hall, and the Center for Great Plains Studies Art Museum are among the cultural attractions available.

UNL consists of nine undergraduate colleges and an Office of Graduate Studies with an enrollment of approximately 23,900 students. The colleges are Agricultural Sciences and Natural Resources (CASNR), Architecture, Arts and Sciences, Business, Education and Human Sciences, Engineering, Hixson-Lied College of Fine and Performing Arts, Journalism and Mass Communications, and Law. These colleges offer bachelor's degrees in more than 100 subject areas. The Office of Graduate Studies offers many programs which lead to masters, professional, certificate, specialist, and doctoral degrees. The University has three campuses – City Campus, East Campus, and Nebraska Innovation Campus. The City Campus is the main campus where the University's administration is located, and many undergraduate classes are held. East Campus classes are primarily related to agriculture but also include the Colleges of Law, the UNMC College of Dentistry, and the Barkley Memorial Center for speech and hearing. Nebraska Innovation Campus combines innovation, research, and partnerships between UNL and private sector businesses. The Department of Food Science and Technology is located there.

The foundation for graduate education is research. The faculty and students at UNL are in the forefront of addressing pressing insect-centered questions and developing new technology to address them. Entomology is an interdisciplinary science, and research questions range from investigation of insect biomes and biodiversity to landscape impacts on insects. One of the University's major commitments is disseminating newly acquired knowledge. Nebraska Extension and Office of Online Education are two important programs conducted by UNL faculty and staff to educate the people of Nebraska.

HISTORY OF THE DEPARTMENT OF ENTOMOLOGY AND ITS CURRICULUM

The University of Nebraska first opened its doors to students in 1869. In 1872 insects were recognized as being worthy of study, and entomology courses were added to the curriculum. The 1872-73 catalogue stated, "The Zoology of Agriculture will include the habits, diseases and treatment of livestock, the

anatomy of the horse, the cow, the sheep and other farm animals, as well as special consideration of insects injurious to vegetation." Entomology was also listed as one of the courses being offered.

Samuel Aughey, Professor of Natural Sciences, handled the earliest instruction in entomology. However, only a few students took entomology courses until interest in entomology increased in 1895-96. During the same year, Conway G. McMillan obtained a Master's degree with a major in geology and minor in entomology, the first graduate degree from UNL.

In 1888, Lawrence Bruner, a recognized Nebraska entomologist, was appointed to the University staff and over the next few years began teaching. However, it was not until 1895 that the Regents established the Department of Entomology and Ornithology with Lawrence Bruner as its chairman. For several years, Bruner handled the department with whatever assistance he could secure for his "special students" as they pursued their entomological studies. His students contributed to both the instructional and the experimental activities of the department.

Several of these early students became prominent entomologists and held responsible positions in many areas of the United States. Among them were Harry G. Barber, Walter D. Hunter, J.C. Crawford, M.A. Carriker, Jr., W. Dwight Pierce, Paul R. Jones, William H. Goodwin, Harry S. Smith, Myron H. Swenk, Ralph W. Dawson, Leroy M. Gates, and Clarence E. Mickel. Others who came along a few years later and became distinguished professionally include Cornelius B. Phillip, Robert H. Nelson, and Orlando S. Bare.

The courses offered in 1895 were preliminary (or general) entomology, economic entomology, systematic entomology, horticultural entomology, and domestic entomology. As the department's research program expanded and teaching staff grew, basic courses were updated, and new courses added. For a listing of current graduate courses, see **Appendix I.**

Research interests, programs, and backgrounds of the faculty are diverse and allow students to pursue many avenues of scientific investigation. In the early years, taxonomic and systematic studies were the most common subjects for advanced degrees. Up until 1950, almost 60 percent of the submitted theses were in these subject areas. A wider choice of subjects has been investigated in the past 50 years because of the larger teaching staff and expanded research programs. Current faculty and department priority areas are available here.

LAWRENCE BRUNER ENTOMOLOGY CLUB

The Bruner Club, named after Lawrence Bruner - the first department chairman - is a social and academic club for entomology graduate students. The Club has eight student officers and two faculty advisors. Officers are elected each April to serve a one-year term and faculty advisors serve for a two-year term.

The Bruner Club aims to support and serve entomology graduate students and the Nebraska community in multiple ways. The club has formed various committees such as outreach, fundraising, education, and social committees to perform all the activities competently. This also allows students to showcase their interests and skills in the department. The club provides community outreach through presentations at the Lincoln Children's Zoo, Pioneers Park Nature Center, K-12 schools, and others to teach the public about the ecological importance of arthropods and promote interest in both entomology and UNL. Social gatherings such as barbecues, potlucks, holiday parties, and collecting trips are sponsored annually by the club. These activities promote camaraderie and strengthen bonds among graduate students and department members. The Bruner Club sponsors seminars and workshops for professional development

and fosters the mental health and emotional well-being of students. These activities are often self-funded through fundraising efforts. The Bruner Club also organizes professional development events in collaboration with other departmental graduate student associations.

Club members are active in professional organizations such as the Entomological Society of America, where they present papers or symposia and regularly participate in the Entomology Games, an insect quiz bowl competition at regional and national entomology meetings. The Bruner Club is also responsible for the selection and presentation of the Distinguished Alumni Award regularly. For that award, the students send seminar invitations to an exemplary Nebraska Entomology alumnus/alumna and coordinate the Alumni Dinner. This Alumni Dinner & Event is an opportunity for alumni from across the country return to UNL for one night to reconnect and celebrate departmental accomplishments.

Bruner Club Officers 2025-2026

President – Nikki Gangavarapu

Vice President – Esha Kaler

Secretary – Maddy Morrison

Treasurer – Haley Fleetwood, Heather Hernandez

Student Representative to Faculty – Gwen Coleman, Kristin Stark

Graduate Student Association Representative – Jae Horn

Seminar Committee Student Representative – Thales Rodrigues da Silva, Kristin Stark

NCB-SAC Representative – Andrea Rilaković

Faculty Advisors – Drs. Lise Pingault and Leslie Rault

Committees

Education	Fundraising	Outreach	Social
Chair	**Chair**	**Co-Chairs**	**Chair**
Andrea Rilaklović	Kashish Verma	Esha Kaler Gwen Coleman	Nikhitha “Nikki” Gangavarapu
Members	**Members**	**Members**	**Members**
Esha Kale Kristin Stark Aarju Aryal	Thalia Ramos Rodriguez Haley Fleetwood Gwen Coleman Heather Hernandez	Clair Klein Kashish Verma Thalia Ramos Rodriguez Haley Fleetwood	Savannah Davidow Aarju Aryal Thales Rodrigues da Silva

FACILITIES AVAILABLE TO ENTOMOLOGY GRADUATE STUDENTS

Department of Entomology
103 Entomology Hall, East Campus
Lincoln, Nebraska 68583-0816
(402) 472-2123

The Department of Entomology is located on the East Campus of UNL in the appropriately named Entomology Hall. Entomology offices and laboratories are also located in the Insectary and Plant Sciences Hall.

Other East Campus Facilities

The Department of Entomology is conveniently located near several important facilities: the Dinsdale Family Learning Commons (formerly C.Y. Thompson Library), the Statistics Department in Hardin Hall, the Recreation and Wellness Center, and the East Campus Union. The East Campus Union has a cafeteria, recreational areas, and meeting facilities.

Research Facilities

Research facilities in the department are assigned to staff members based on research programs. Graduate students have access to these facilities through their advisors. The Entomology Department conducts limited field research at the East Campus location. Most field research is conducted at the University of Nebraska Eastern Nebraska Research, Extension, and Education Center (ENREEC), located near Ithaca, or at district centers located at Scottsbluff and North Platte. These district centers are staffed by both research and extension specialists from various disciplines.

University of Nebraska State Museum, Division of Entomology
Systematics Research Collections, City Campus
https://museum.unl.edu/collections/entomology/index.html
Curator MJ Paulsen, Ph.D.
Email: mjpaulsen@unl.edu

The Entomology Division cares for specimens of terrestrial arthropods, predominantly insects. As one of the largest collections in the Great Plains (~2 million specimens), the holdings focus on Nebraska, but also the Neotropics and are cosmopolitan in scope. The taxonomic areas of focus are scarabaeoid beetles (Coleoptera) and other beetles, grasshoppers and relatives (Orthoptera), and bees (apoid Hymenoptera).

The Division strives to have representatives of all insect species of Nebraska catalogued electronically (FileMaker Pro) and represented in the collection as a repository of data on our state's natural heritage. This includes continuing field collection to document changes in our existing species' distributions and abundance as well as the discovery of species previously undocumented in the state. This knowledge is made accessible through extensive organization via modern curation techniques, an extensive web presence, and an increased emphasis on providing specimen-level data.

Panhandle Research, Extension, and Education Center (PHREEC)
4502 Avenue I
Scottsbluff, Nebraska 69361
(308) 632-1230

The Panhandle Center is unique from other centers by having satellite field laboratories associated with it: Scottsbluff, the High Plains Agricultural Lab, and the Northwest Agricultural Laboratories. Access to irrigated and dryland field plot areas is available at all locations. The center itself has 320 acres for research plots and has an entomology laboratory, insect rearing, and greenhouse space. Graduate student office space is available along with housing facilities at the Scottsbluff and High Plains Ag Laboratories. Recent research emphasis has been on pests associated with wheat and specialty crops such as sugar beets and dry beans.

West Central Research, Extension, and Education Center (WCREEC)
402 West State Farm Road
North Platte, Nebraska 69101
(308) 696-6700

The WCREEC at North Platte has excellent facilities with workspace, equipment, housing, offices, and office equipment for graduate students and staff. The Center is set on 1,848 acres and includes greenhouses, feed mill, grain storage facility, equipment storage buildings, calving shed, cattle working facility, entomology lab, wind tunnels, shops, pastures, and feedlots. Other buildings at WCREEC include residences for several employees and graduate students. The Agroecosystems Entomology Lab is housed in a building with approximately 3,000 sq. ft. of multipurpose laboratory space. The lab has standard wet lab equipment (e.g., fume hood, balances, stereo and light microscopes, and molecular bioassay tools). The lab houses three Percival reach-in plant growth chambers, Berlese funnels, freezers, refrigerators, and sample storage space. The Livestock Insect Laboratory supports insect research with focus on biopesticide development, fly resistance monitoring, insecticide evaluations, the design and development of insecticide delivery systems, fly trap design and evaluation, and insect rearing facilities for three fly species.

Crop related research can be conducted on 383 acres of crop land at the Center, and on 1,120 acres at the West Central Water Resources Field Laboratory near Brule and 640 acres at the Henry J. Stumpf International Wheat Center near Grant, Nebraska. WCREEC also maintains the Gudmundsen Sandhills Laboratory, a 12,800-acre ranch near Whitman, Nebraska, where a cattle herd of 500 head is available for livestock studies.

South Central Agricultural Laboratory (SCAL)
820 Road 313
Clay Center, NE 68933-0066
(402) 762-3536

The SCAL Research Farm is well equipped for field research. Currently 640 acres are being used for research, including both dryland and irrigated crop production. Entomology programs focus on insect pest management and biological control of corn and soybean insects.

Eastern Nebraska Research, Extension, and Education Center (ENREEC)
1071 County Road G
Ithaca, Nebraska 68033
(402) 624-8037

The University of Nebraska Eastern Nebraska Research, Extension, and Education Center (ENREEC) is headquartered near Mead, Nebraska. ENREEC was formerly the University of Nebraska's Agricultural Research and Development Center (ARDC). ENREEC also includes the University of Nebraska Southeast Extension District, Northeast Extension District, and the newly developed Metro Extension District, as well as the South Central Ag Lab, Haskell Ag Lab, Barta Brothers Ranch and Kimmel Education and

Research Center. Approximately 80 acres of land, 20 of which can be irrigated, are currently assigned to the Entomology Department. Equipment and facilities include soil washing facilities, research laboratories, storage buildings, shop areas, and a full complement of small plot farm implements. Most of the entomology research conducted at the ENREEC Ithaca location pertains to the biology, ecology, and management of field crop insects, turfgrass arthropods, apiculture, landscape entomology, and insect pests of livestock. The department also has limited access to large crop acreages on the 9,500-acre ENREEC facility.

Haskell Agricultural Lab (HAL)
57905 866 Road
Concord, Nebraska 68728
(402) 584-2234

Haskell Agricultural Laboratory is well equipped to conduct applied entomological field studies. In recent years, research has primarily focused on European corn borer, soybean arthropods, and chemigation. The center houses several chemigation units, including a four-tower overhead center pivot and a six-tower lateral overhead irrigation system. The center also houses the necessary high clearance ground application equipment necessary for insecticide research. A modest rearing facility is operable, and a shop is available for equipment manufacture, storage, and upkeep. Graduate student workspace is limited but adequate for some students.

Departmental Services, Facilities, and Supplies

Community **computers** are provided in the graduate student offices. Since many students will be using these computers, your files should be backed up on other sources (USB flash drive, One Drive) rather than onto the hard drives. The network also provides access to laser printers and the copier. In accordance with university policy, the laser printers and copier are to be used only for job-related projects. The laser printers and copier may be used for course work or assistantship work. Email ITS at nusupport@nebraska.edu to get access to the printers and copier.

The PCs allow students to obtain research information, use SAS, run other programs, and use e-mail capabilities. Each student is required to use a UNL Huskers email account since that is where communication from university offices is sent. Consult your advisor if additional computing capabilities are required.

Questions and clarifications on the computing information and policies outlined above may be obtained from the chair of the graduate student computer committee.

Private Use – Use of computer resources by faculty, staff, or students for personal purposes or monetary gain is prohibited unless approved by the *Board of Regents* or an administrative officer designated by the *Board of Regents* for such approval. The university must be reimbursed for such uses.

Departmental Rules for Graduate Student Computer Use

1. Do not add shortcuts to the desktops.
2. Do not remove browser shortcuts.
3. Do not change desktop backgrounds or defaults in programs without consulting a computer committee member.
4. Do not add or delete programs without consulting a computer committee member.

5. Do not use computers for pornography – this is a University regulation. See Executive Memorandum No. 16 – Policy for Responsible Use of University Computers and Information Systems.

Ethical Conduct for the Use of UNL Computing Resources – University policy about the use of university computers is very specific and carries very severe penalties if misused. University computers, networks, or any equipment used for hacking, malicious use, and pornography are grounds for immediate dismissal, criminal prosecution, or both.

Any person who is in violation of the University policy regarding the use of computing resources may lose access to these resources and be subject to disciplinary action. Among the more serious violations are:

1. Use of University computing allocations for private or personal purposes, or for purposes other than those for which the allocation was granted.
2. Violation or attempted violation of the rights of others including:
    a. The rights of privacy.
    b. The rights of ownership.
    c. The right to equitable access to computing resources.
3. Modification or attempted modification of the operating environment of the facilities without authorization.
4. Theft or attempted theft of data or programs belonging to others.

The University intends to meet its responsibilities to ensure the privacy of the users of the resources and to ensure that public monies are used as intended.

Supplies. All office supplies should be requested through the main office or the student's advisor.

Photocopier. The copier is available for use by graduate students. Students must get a code from the Entomology main office to gain access. Copies that are not for departmental research or teaching are 5 cents/page.

Keys. Graduate students should request building keys from the departmental office. Students must return keys when they finish their programs. Students should secure their personal belongings when they are in the building and remember to lock all doors during non-business hours.

Desk Space. The major professor in conjunction with the Bruner Club vice-president will locate a desk for the student. As other individuals leave, students have the option of changing desks.

FINANCIAL ASSISTANCE

Graduate Assistantships

The Department of Entomology offers graduate research assistantships (GRA) and graduate teaching assistantships (TA) to both M.S. and Ph.D. students. Entomology GRAs are on 0.49 FTE appointments which require up to 20 hours of service per week at the discretion of the major advisor. The service may include working for the major advisor, the department, etc. Service is in addition to normal student activities (classes, thesis/dissertation research). Minimum and maximum enrollment requirements are listed below. Entomology TAs may be on 0.33 FTE appointments which could require approximately 13

hours of service (teaching) per week. TA appointments are usually for the semester or academic year. Entomology TAs are usually appointed to research assistantships during the summer. Graduate students who are employed are advised not to exceed the following registration guidelines established by the Graduate Council. Maximum registration guidelines, registration requirements for full/part-time status, and registration requirements can be found here.

Departmental assistantships are competitive, and a limited number are available. They may be funded from state or federal appropriations or from grants received from state, federal, or private granting agencies. Although the monthly stipends for M.S. and Ph.D. assistantships are slightly different, all M.S. and Ph.D. assistantships offered by the Department of Entomology will be at the same monthly rate, respectively. However, students who apply for assistantships from external units or agencies may receive the monthly stipends approved by that unit or agency. Assistantships that are included in a grant provided to a faculty member will be considered as a Department of Entomology assistantship and must be at the departmental rate.

GRAs at research and extension centers carry out their research under the direction of an advisor at the district center and complete formal course work during the academic year in Lincoln under the direction of a co-advisor. Students at these centers should register for special Extension-related sections of ENTO 899 (thesis) or ENTO 999 (dissertation).

Occasionally, a student may have specialized training needs which must be obtained through a cooperative program with another department. In this case, an assistantship may be arranged, with the approval of the advisors and department chairpersons involved, for funding through both departments.

Because assistantships carry a work requirement, students appointed 0.49 FTE are limited to a maximum of 12 credit hours per fall or spring semester and 6 credit hours per 8-wk summer session, 4 credits per 5-wk session, and 2 credits per 3-wk session. Graduate assistantships of 0.49 or 0.33 FTE provide a tuition waiver. Graduate assistants appointed more than 0.33 FTE for two consecutive semesters in a given academic year may be eligible for up to 12 hours of tuition waiver during the summer sessions if they are not on appointment. Student eligibility should be clarified with Graduate Studies. Graduate assistants on tuition waiver are required to pay student and program fees. Graduate students on tuition waiver who withdraw from the graduate program or resign their RA/TA during a semester, are required by UNL to pay all or a portion of the tuition costs for that semester.

Department of Entomology stipends for the 2025-2026 academic year are:

Graduate Research Assistant – 0.49 FTE

M.S. – $25,392 ($2,116 monthly); Ph.D. – $26,664 ($2,222 monthly)

Full-Time Student Certification

Students who need the Office of Graduate Studies to certify full-time status must enroll for at least nine credit hours during each academic year semester and six hours during the summer sessions. Click here for information in the *Graduate Catalog*. With approval of the Dean of Graduate Studies, students near the end of their programs who are in a thesis-option master's degree program (i.e., Option A) or candidates for doctoral degrees, may register for fewer than the minimum hours required and be granted full-time status provided they are not employed more than 20 hours per week (half time). Click here to request Certification of Full Time Graduate Status. Master's students may use the full-time certification no more than 12 consecutive months (3 terms); doctoral candidates may use the full-time certification no more than 24 consecutive months (6 terms). Doctoral Candidates who need to maintain full-time

status beyond the 24-month period will need to again register for at least 9 hours each academic semester and 0-6 hours each summer.

Scholarships and Fellowships
Scholarships and fellowships are available to both M.S. and Ph.D. students. Any student interested in applying for unrestricted fellowships can check out the Graduate Studies website. For information relating to fellowships and scholarships restricted to the Department of Entomology, refer to **Appendix II**. Scholarships and fellowships may be offered in addition to other financial assistance. The student should be aware of all stipulations on any fellowship or scholarship for which he/she is applying, and should consult the Funding section in the *Graduate Catalog*.

Fellowship recipients are required to be "full-time" students (at least 9 hours per spring and fall semester) during the term of their appointment. Most fellowships are academic year appointments, and enrollment requirements do not normally apply to summer sessions.

Hourly
A student may be employed on an hourly basis on a project in the area of his/her study. Pay is based on amount of experience and academic level (B.S., M.S., Ph.D.). A student being paid on an hourly basis is not eligible to receive GRA or TA benefits.

Other Assistance
Information regarding other types of financial assistance such as loans may be obtained from the Office of Scholarships and Financial Aid.

University Health Services

University Program and Facilities Fees (UPFF) are based on enrollment. If a student is enrolled for 7 credit hours or more for any semester (fall, spring, or summer), the University Health Center fee is included in the UPFF fees. If enrolled for less than 7 credit hours (even if full-time certified) for any semester or the summer, the University Health Center fee is deducted from the UPFF fees. This means that students will be charged for their visits.

A graduate student on an assistantship will be offered basic individual student health insurance at a reduced rate, however, they must “accept” or “waive” the health insurance offer. The student and UNL share the cost of the premium. Approximately 21 percent of the health insurance premium annual cost will be directly billed to the student's account. Students who do not want the UNL health insurance will need to complete a Waiver of Insurance form **each semester** and submit to the Health Center business office early in the semester. F1 or J1 visa holding international students must participate unless they provide proof of comparable insurance and complete a waiver each semester by the published deadline. Click here for information on medical, dental, vision, and pharmacy coverage.

Role of the Department Graduate Committee

The graduate committee serves as a resource body to students and faculty and formulates and recommends changes in policy pertaining to curricula and departmental requirements for advanced degrees.

The graduate committee consists of a graduate chair plus three other elected members. The graduate chair will be a member of the graduate faculty and be appointed by the department head to a three-year

term after having served one or more years as a member of the graduate committee. Elected members will be graduate faculty elected by a vote of the entire, eligible faculty to a three-year term with reelection possible. Elections will be held on a staggered basis, i.e., one new member of the committee will be elected each year as one existing member rotates off the committee after their three-year term is completed. Elections will be held in May each year. Courtesy and adjunct faculty are not eligible to serve on the committee nor are they eligible to vote for members of the committee during the May election.

Graduate Chair Responsibilities

The graduate chair will be the contact person for all graduate applicants and has other responsibilities assigned by the Office of Graduate Studies. The graduate chair will represent the Entomology Department in all interactions with the Office of Graduate Studies. The chair will preside at all graduate committee meetings and will circulate a call for agenda items prior to each meeting. With the assistance of the department office staff and the distance education coordinator, the graduate chair will manage relevant record keeping and documentation. The graduate chair will also manage and administer the general entomology exam that is required for all graduate programs.

Letters of acceptance and official offering of assistantships will come from the chair of the graduate committee following recommendations from the graduate committee and the faculty member agreeing to serve as major advisor. All correspondence regarding graduate programs, including requests for waivers of requirements, should go through the graduate committee chair and not directly to the Office of Graduate Studies.

Elected Member Responsibilities

Elected members will provide faculty governance for all graduate programs, will vote on the approval of graduate school admission applications, and will vote on all matters they are asked to consider by the chair or department head. They will also receive input from all faculty and supply agenda items to the graduate chair.

Graduate Program Applications

The graduate chair and voting members will review all graduate applications and make recommendations for approval, approval with conditions, or non-approval. At least three voting members must consider all applications, and if necessary, the graduate chair may appoint a substitute member from the entomology faculty to obtain the necessary members to consider an application. If consensus on the status of an application is not reached, the department head will be notified. All disagreements will be settled by a majority vote with the department head casting the deciding vote in case of a tie. The graduate chair will distribute all approved applications to the faculty. If an applicant designates a specific faculty member that they wish to study with, the graduate chair will indicate such when the application is circulated. If the applicant does not indicate a specific faculty member, graduate committee members will not contact applicants until all faculty have had an opportunity to review the application.

2025-2026 Entomology Graduate Committee

- Tom Weissling, Chair
- Justin McMechan (term 2023 – 2026)
- Kyle Koch (term 2024 – 2027)
- Leslie Rault (term 2025 – 2028)
- Kelly White, Graduate Coordinator

ROLE OF THE SUPERVISORY COMMITTEES

The faculty member recommending admission of an applicant will serve as chair or co-chair of the supervisory committee. It is the chair's responsibility to see that all activities relating to the student's graduate program comply with the regulations and procedures of UNL and the department.

During the first semester in residence, the candidate in conjunction with her/his faculty advisor should establish their supervisory committee.

Entomology Certificate Supervisory Committee – A supervisory committee for the graduate certificate consists of not less than three graduate faculty.

M.S. Supervisory Committee – A supervisory committee for the M.S. degree consists of not less than three graduate faculty.

Ph.D. Supervisory Committee – The major professor assists the student in developing a proposed supervisory committee. The supervisory committee will consist of at least four graduate faculty. All members must either be on the graduate faculty or be non-graduate faculty approved to perform specified graduate faculty duties. At least one graduate faculty member external to the academic department or area in which the doctorate is to be granted must be included on the supervisory committee. If a minor is desired for a Ph.D., a faculty member from the appropriate department must be a member of the committee. When the representative of the minor department is a graduate faculty member, he/she may also serve as the outside representative.

Satisfactory Progress Requirement – In order to meet the Department of Entomology satisfactory progress requirement, graduate students must meet all department graduate program requirements, demonstrate progress on their research program, and make B or better in all courses in the major department. A grade of B- or lower is not considered a passing grade in the major. If a student receives a grade of B- or less in the major or C- or less in any collateral or supporting area of work, the student's supervisory committee must meet and review the academic progress of the student. The supervisory committee will then make recommendations to the department graduate committee regarding the student's continuation in the graduate program.

Leave Policy for Graduate Students – UNL's Academic Leave policy is at https://graduate.unl.edu/academics/academic-leave.

Graduate research assistantships (GRA) and teaching assistantships (TA) offered to students carry specific and implied obligations. A student accepting the GRA/TA agrees to work toward these obligations as specified by the major advisor. At the same time, the department and faculty recognize the reasonableness of requests for leave and the hardships that students may incur if leave is not granted. Reasonable requests may include illness and/or personal matters. The university and/or the department does not have a policy for long-term illness. The graduate student should submit a request for leave by email to their major professor. This leave request should include 1) beginning and ending dates, 2) reason for absence, and 3) a phone number where the student can be contacted in case of an emergency. Approval notice will be emailed to the student and copied to the graduate secretary by the major professor.

Students receiving a GRA/TA also need to be aware that semester breaks are breaks from class only, not leave time, and that they are still responsible for fulfilling their research and other obligations during those periods. This policy shall apply to all resident students with an assistantship and those on fellowships and/or funding from other sources. All students are supported financially by investments of time and space by both the faculty and the department and are expected to make reasonable progress in their graduate program.

International students need approval and documentation from the International Student and Scholar Office (ISSO) and the department to assist with and meet the needs of immigration and visa issues prior to leaving / reentering the USA. International students departing the country on protracted leave will cease to receive a stipend during an extended leave time. Documentation verifying receipt of a stipend upon their return should be requested from the entomology office associate before departing.

REQUIREMENTS FOR THE GRADUATE CERTIFICATE IN ENTOMOLOGY

Graduate Certificate web page

The Department of Entomology at the University of Nebraska-Lincoln (UNL) offers a graduate certificate in Entomology. This certificate is available to online and on-campus students and may be earned by successfully completing 15 graduate credits in Entomology.

The graduate certificate is designed to familiarize students with entomology and the importance of insects in the ecosystem and for human resilience. The program's flexibility should be attractive to students who want to advance their careers in academia or industry. Students will be able to apply the program's coursework directly to their professions.

The certificate may also interest others in the post-baccalaureate community, including employees in the pest control industry and the military, science teachers, lab technicians, extension agents, or conservation biologists. The online courses provide flexibility and opportunity for students to earn the certificate without leaving their jobs, communities, or families.

Students who have successfully completed the certificate are invited to apply for the online MS in Entomology at the University of Nebraska-Lincoln.

Certificate applicants should have:

- a B.S. or B.A. degree from an accredited college or university - with a 3.0 GPA on a 4.0 scale
- Course work in the following subjects: *
  - introductory entomology
  - general biology
  - chemistry, and
  - mathematics.
  - * If students are missing any of the pre-requisites, they may be admitted provisionally and complete these classes during the first year of the certificate.
- Statement of Interests and goals for pursuing the certificate
- 3 academic or professional letters of recommendation (no family members, please)
- Unofficial transcripts (official transcripts required at a later date)
- English proficiency requirements
- $50 non-refundable application fee

Scholastic Grade Requirements

- 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. A grade of B- is not acceptable.
- A minimum grade of C or P (pass) is required for graduate credit in 800 level courses. A grade of C- is not acceptable in a cross-listed graduate/undergraduate course.
- A minimum grade of C or P (pass) is required for graduate credit in 900-level, graduate-only courses, or 800 level courses without 400 or lower counterparts.

No Memorandum of Courses or Program of Studies is required for the graduate certificate. All coursework should be completed within five years.

REQUIREMENTS FOR THE MASTER'S DEGREE

Resources for current students

M.S. degree requirements

Master's Degree Options

The Office of Graduate Studies offers the degree of Master of Science under two options.

Option A
Option A, the only option requiring a thesis, should be taken by individuals who are preparing for careers in research and scholarly work or in college or university teaching. Students pursing Option A must be supported from an assistantship provided by the faculty advisor or department; from grants or awards from foreign governments, domestic agencies or foundations that are awarded directly to the student; or from grants or awards that are given by or through the University of Nebraska. Only Option A students may receive graduate research assistantships. Resident students seeking an M.S. in Entomology generally follow Option A.

The student, in consultation with the major advisor, selects the subject of the thesis from the candidate's field of major interest. The thesis topic must be approved by the student's supervisory committee. The thesis should reveal a capacity to carry on independent study or research and should demonstrate the student's ability to use the techniques employed in her/his field of investigation. The thesis must conform in style and form to the Office of Graduate Studies specifications. Examples may be checked out from the entomology main office or examined on Digital Commons.

CHECKLIST FOR OPTION A

- ☐ Read general regulations and M.S. degree sections of the Graduate Catalog and the Entomology Graduate Student Handbook and follow master degree deadline dates through completion of the degree: https://graduate.unl.edu/academics/program-steps/masters-degree-steps-to-completion.

- ☐ **Form a supervisory committee during the first semester in residency** – The advisory committee must consist of at least three members. The supervisory committee also serves as the examining committee.

- ☐ **Hold First Meeting of the M.S. Supervisory Committee**
  The objectives for the first committee meeting of M.S. students are to identify any deficiencies, establish a program of courses (including a minor, if desired), and define a research program. To meet these objectives, the student needs to prepare some preliminary information consisting of three parts before the first committee meeting.
  - Develop a list of the student's undergraduate course work emphasizing all science, mathematics, and any other supporting courses.
  - Identify courses to be taken to remove deficiencies (if any). These courses may not count toward the master's program. Course deficiencies must be removed before submitting the Memorandum of Courses.

- Present a list of proposed courses to fulfill degree requirements with proposed courses listed in chronological order by semester. The student should ensure that the criteria listed under "Requirements for the Master's Degree" are met.
- Prepare a general statement of the problem to be researched and briefly describe the objectives to be accomplished.

☐ Memorandum of Courses – must be filed with the Office of Graduate Studies before more than half of all credit hours are completed in the student's program. Students have five (5) years to complete an MS degree at UNL. Graduate courses expire 10 years after they have been taken.

Core Curriculum Courses – To meet core curriculum requirements, all graduate students must take, or have taken, either ENTO 800 (Insect Biodiversity) **or** ENTO 818 (Insect ID and Natural History) and one 3-credit hour course in an area of professional development, such as scientific writing, communication skills, presentation methods, teaching strategies, extension, outreach, leadership, etc. (potential courses are listed in **Appendix III**). In addition, all graduate students are required to take two credit hours of seminar (ENTO 905). One is a research proposal seminar and second is the non-research seminar. The nature/form of second seminar (non-research) presentation can be decided by the student's supervisory committee. In addition, a student does not need the second non-research seminar for the Ph.D. program, if the student had already completed the presentation during his/her MS program. In that scenario, the second seminar (non-research seminar) should be at the discretion of the student's supervisory committee.

- Must have at least 30 total credit hours (beyond the B.A. or B.S.)
- Must have at least 22 (22-24) credit hours of courses. (This is a department requirement; the Office of Graduate Studies allows 20-24 credit hours.)
- Only 6-8 credit hours for master's thesis. (The department will only allow 6-8 hours to be included on the Memorandum of Courses, but additional hours may be taken. The Office of Graduate Studies allows 6-10 hours.)
- At least half of all hours in major area.
- 8 credit hours in courses open exclusively to graduate students (900- or 800-level courses without 400 counterparts)
- Must take or have taken Entomology 800 (Insect Biodiversity) or Entomology 818 (Insect ID and Natural History).
- Must take two credits of seminar (typically ENTO 905) (Seminar must include a formal [ca. 40 minutes] presentation.)
- Minors (which are optional) require nine to 12 credit hours in the minor department and a member of the minor department should be on the advisory committee.
- Indicate to the advisory committee the general area of research and provide a brief description of proposed research objectives. A brief description of the research topic or field is required on the Memorandum of Courses.
- After the meeting, the Memorandum of Courses must be signed by the major professor, graduate committee chair, and member of the graduate committee from the minor department.
- The Office of Graduate Studies will send a copy of the approved Memorandum of Courses to be placed in the graduate student's file in the main office.

Scholastic Grade Requirements

- 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. A grade of B- is not acceptable.

- 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. A grade of C- is not acceptable in a cross-listed course. NOTE: A grade of B- or lower in a minor course will result in a minor comprehensive exam being required.
- 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.
- When applied toward an advanced degree program, only courses at the 900 level, or 800 level without 400 or lower counterparts, *in the major department or interdepartmental area* may be taken on a pass/no pass (P/N) basis. In *minor, collateral, or supporting areas of work*, 800 level courses with 400 or lower counterparts can be taken on a P/N basis. A student failing to receive a minimum acceptable grade for graduate level credit may not continue his/her program of studies without permission of the departmental graduate committee concerned, which may require a special examination to determine the student's qualifications for further work.

Grading Graduate Research and Thesis Hours – The following grading procedures will be used for thesis and dissertation hours:

IP: (In progress) indicates satisfactory work in progress (i.e., student is making progress or effort as determined by the faculty supervisor). The "IP" stands until the student successfully defends and the supervisory committee accepts the thesis or dissertation, when a P or letter grade is submitted. The IP is a financial aid requirement.

XP: (No progress) indicates lack of adequate progress. Because the "XP" grade is not used in calculating the GPA, no direct academic sanction, such as academic dismissal from the University, will be imposed for earning one or more "XP" grades. However, graduate programs may wish to use a series of "XP" grades as a basis for terminating the student from a graduate program.

Note that on the final transcript, the IP and XP grades would count towards attempted hours but for Financial Aid purposes, they would count differently. Both grades would convert to an "I" on the official record, if not graded as a P (Pass) or with a letter grade.

Hold Second Committee Meeting with M.S. Supervisory Committee – M.S. students must meet with their committee during the second semester in residency. There are two main objectives for this meeting. The <u>first</u> is to confirm the proposed course of study; if changes in courses occur, reasons for the change should be supplied. The <u>second</u> is to prepare a formal research proposal for presentation to the committee. It should include review of pertinent literature – although the literature review will need to be expanded as research progresses, a thorough basic knowledge is necessary to develop sound objectives and a strong plan of attack. The review should be sufficiently complete at this point to guarantee that the committee is comfortable with the student's knowledge of the research area.

- Statement of research question – what is needed and what new knowledge will be contributed.
- Research objectives – define the specific research objectives to address the research question.
- Procedures – for each objective, describe the specific experimental procedures to be followed including experimental design and analysis along with a schedule of activities.
- Put revised research proposal (revised in response to committee suggestions) in student folder.

If a student enters school in January and plans to perform extensive field research that summer, an expanded research proposal is needed for the first semester committee meeting.

☐ **Annual Committee Meetings with Supervisory Committee**

- Inform committee of progress in courses and research. Make any necessary modifications to research as needed (and to the program of study if necessary; changes will require approval from the Office of Graduate Studies). A written summary of research findings to date is encouraged.
- The major advisor should send a memo to the graduate committee chair indicating that a meeting was held and whether satisfactory progress has been made to date. This will be included in the student's file in the main office.

☐ Complete **Annual Review of Student Progress** (see **Appendix IV**) during the spring semester to submit to the department head. A meeting will subsequently be scheduled.

☐ **Preparation for Graduation**

- File Application for Graduation including the $25 graduation fee (non-refundable).
- **Thesis Preparation**. Follow Preparing a Thesis or Dissertation. A copy must be presented to the supervisory committee a **minimum of two weeks** before the oral exam. Electronically submit the title page and abstract to the master's specialist for preliminary review and approval at least two weeks (one week in summer) prior to the oral defense or by the posted deadline. Present thesis seminar to the department and defend the thesis with the supervisory committee. Non-thesis related questions also may be part of this exam at the committee's discretion.
- The Final Examination Report for Master's Degree must be submitted at least four weeks (three in summer) prior to the date of the oral exam. Final examinations are required for M.S. candidates and are open to all faculty, staff, and students. Send (or take) completed form signed by advisor(s) and graduate committee chair to the master's programs specialist in Graduate Studies, 101 Seaton Hall, 1525 U Street, Lincoln, NE 68588-0619. Submitting this form generates the final graduation check. The form should include the date and time of the exam and the names of oral exam committee members. The approved form will be returned to the major advisor for safekeeping until the day of the thesis defense.

☐ **Examinations**

- **The Entomology General Exam** (or Entomology Certification Board exam). The general exam consists of a standardized entomology exam developed and administered by the department. The exam may be taken up to a total of three times but only one time per semester and once during the summer.
- **The Written Comprehensive Exam**. When a student has substantially completed courses in the program, he/she must pass a written comprehensive examination. The specialized exam is developed by the student's supervisory committee. The supervisory committee will function as the examination committee that is required by the Office of Graduate Studies. This exam must be completed within ten months but no less than one week prior to the oral exam.
- **The Oral Examination**. The oral examination is essentially a defense of the thesis and is conducted in a manner similar to a seminar. The examination, sometimes called the thesis defense, consists of two parts. In the first phase, the student presents research results to an open audience: faculty, students, and other interested individuals may attend and ask questions. In the second phase, the student and her/his supervisory committee complete the examination during a closed session, but other faculty may attend.
- The objectives of these examinations are for the student to demonstrate proficiency in general entomology and biology, and to apply entomological and biological principles and information in problem solving situations.
- Pass a specialized exam for the minor (if required, this can be waived by the minor department).

☐ **Final Steps to Graduation**

- Procedures to deposit the thesis following the oral examination are available in the Preparing a Thesis or Dissertation.
- Schedule exit interview with department head.
- Provide the business center a change of address if moving to another city or state (important for mailing the W-2).
- Make sure desk space is cleaned out.
- Return UNL keys to the entomology main office.

Option B

Option B is a combination of the former Options II and III and became effective on August 23, 2021. Option B requires 30 credit hours, provides a wider range of courses than permissible under Option A and does not require a thesis. Students in this program develop a project since this degree is aimed toward students pursuing practice-based or professional careers.

The program consists of an Entomology major and an optional minor consisting of nine (9) credits. Fifteen credits must be in Entomology and 15 credits must be graduate-only courses (with no undergraduate counterpart). The optional minor is included in the total 30 credit hours and should be from a complementary subject matter. The MS minor must be approved by the minor department.

Students have 5 years to complete an MS degree at UNL. Graduate courses expire 10 years after they have been taken.

☐ **Examinations for Option B**

- **The Entomology General Exam** (or Entomology Certification Board exam). The general exam consists of a standardized entomology exam developed and administered by the department. The exam may be taken up to a total of three times but only one time per semester and once during the summer.
- **The Written Comprehensive Exam.** When a student has substantially completed courses in the program, he/she must pass a written comprehensive examination. The specialized exam is developed by the student's supervisory committee. The supervisory committee will function as the examination committee that is required by the Office of Graduate Studies.
- The objectives of these examinations are for the student to demonstrate proficiency in general entomology and biology, and to apply entomological and biological principles and information in problem solving situations.
- Pass a specialized exam for the minor (if required, this can be waived by the minor department).

Department Voucher Specimen Policy (See **Appendix V** for details).

REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY DEGREE

Resources for current students

Academic Program Requirements

Students pursing the Doctor of Philosophy degree must be supported from an assistantship provided by the faculty advisor or department; from grants or awards from foreign governments, domestic agencies or foundations that are awarded directly to the student; or from grants or awards that are given by or through the University of Nebraska. Regular full-time (1.00 FTE) employees who qualify for the Employee & Dependent Scholarship Program can also pursue a degree in the department.

CHECKLIST

- ☐ Read general regulations and Ph.D. degree sections of the Graduate Catalog and the Entomology Graduate Student Handbook and follow Doctoral Degree Forms and Deadlines through completion of degree.

- ☐ Ph.D. Supervisory Committee – The supervisory committee for the Ph.D. degree consists of at least four graduate faculty. All members must either be on the graduate faculty or be non-graduate faculty approved to perform specified graduate faculty duties. At least one graduate faculty external to the academic department or area in which the doctorate is to be granted must be included on the supervisory committee. If a minor is desired for a Ph.D., a faculty member from the appropriate department must be a member of the committee. When the representative of the minor department is a graduate faculty member, he/she may also serve as the outside representative. A dissertation reading committee (two supervisory committee members other than the chair) is designated. The reading committee will evaluate the dissertation before it is circulated to the entire supervisory committee. Submit Appointment of Supervisory Committee form to the Office of Graduate Studies. It should be filed by the student prior to the completion of 45 credit hours, exclusive of research tools or language requirements.

- ☐ **Hold First Committee Meeting** – The objectives of the first meeting include identifying any deficiencies, establishing a program of courses (including a minor, if desired), determining how the language/research tool, collateral field, minor requirement will be met, and defining a research program. The student needs to assemble preliminary information to accomplish the following four objectives:
  1. A list of background courses is required and should include relevant undergraduate and graduate courses. The supervisory committee uses the graduate course list to determine how many credits the student can transfer from their M.S. degree and to help the student select appropriate courses to provide a sound program of study. Thirty hours (counting a maximum of eight hours thesis work) are accepted from the M.S. degree. If the student earned more than 30 hours during her/his M.S. program, the supervisory committee may accept up to 15 additional hours towards the Ph.D. degree. Identify courses to be taken to remove deficiencies (if any). These courses will not count toward the Ph.D. program.
  2. A list of proposed courses (listed chronologically by semester) is required and should satisfy the following requirements: 1) graduate work must total at least 90 hours, including dissertation; 2) at least 45 hours and half of all total hours must be completed after the proposed program is

approved by the Office of Graduate Studies; 3) at least one half of the course work, including dissertation, should be taken in entomology (this includes hours taken during the M.S. program); 4) three semester hours of formal presentation seminars are required; and 5) if a minor is desired, at least 15 hours must be taken, and at least 6 hours must be from courses open exclusively to graduate students (900 level or 800 level without 400 or lower counterparts).

3. A Ph.D. candidate must satisfy the language, research tool, minor, or collateral field requirement. In the Department of Entomology, a minor will meet the language/ research tool requirement. If courses are taken to fulfill the collateral field requirement, they are in addition to the required courses previously mentioned.
4. Students must prepare a general outline of the proposed research to include a general statement of the problem and a brief description of proposed research objectives.

☐ **Prepare** Program of Studies for the Doctoral Degree

Core Curriculum Courses – To meet core curriculum requirements, all graduate students must take, or have taken, either ENTO 800 (Insect Biodiversity) **or** ENTO 818 (Insect ID and Natural History) and one 3-credit hour course in an area of professional development, such as scientific writing, communication skills, presentation methods, teaching strategies, extension, outreach, leadership, etc. (potential courses are listed in **Appendix III**). In addition, all graduate students are required to take two credit hours of seminar (ENTO 905). One is a research proposal seminar and the second is the non-research seminar. The nature/form of second seminar (non-research) presentation can be decided by the student's supervisory committee. In addition, a student does not need the second non-research seminar for the Ph.D. program, if the student had already completed the presentation during his/her MS program. In that scenario, the second seminar (non-research seminar) should be at the discretion of the student's supervisory committee.

Must take at least 90 total credit hours (beyond the B.A. or B.S.)

- Can have at least 30 credit hours apply from the master's degree. Up to 15 additional credits from the master's degree can apply toward the Ph.D. (at the discretion of the supervisory committee).
- Can have 6-8 credit hours for master's thesis research be applied toward the Ph.D.
- At least 45 hours and half of all total hours must be completed after the program of studies is approved (courses being taken in the semester the program of studies is filed with the Office of Graduate Studies count as after the filing).
- At least half of all total hours should be in entomology (hours from the master's degree and dissertation can count toward this total).
- Between 12-55 hours of dissertation research.
- Must take or have taken Entomology 800 (Insect Biodiversity) or Entomology 818 (Insect ID and Natural History.
- Must take 2 credits of seminar (typically Entomology 905) (Seminar must include a formal [ca. 40 minutes] presentation; 1 credit hour seminar from the master's degree can count toward this requirement.
- At least half of the total credit hours must be completed at the University of Nebraska.
- **Language/Research Tool/Collateral Field/Minor**. The Department of Entomology requires a doctoral student to take a foreign language, a research tool, a collateral field, or a minor. Latitude is given in determining how this requirement will be fulfilled; however, the completion of this requirement should increase the student's research ability and contribute to their professional status. Proposed course work or study to complete this requirement must have prior approval from the student's supervisory committee.

All Ph.D. students must qualify in one of these areas, which is regarded as an addition to the regular course of study. Consequently, credit hours to meet this requirement (except for minors) will not count toward the total needed for the Ph.D. degree.

Language – A demonstrated reading knowledge of a foreign language or sufficient knowledge to converse in the language and translate both directions. German, French, Russian, Spanish, Italian, Portuguese, Greek, Latin, the Scandinavian languages, or the Oriental languages are suggested languages. International students may use English as a second language to meet the language/ research tool requirement.

Research Tool – Demonstrated mastery of a special technique approved by the supervisory committee. A research tool should be chosen from an area not related to, but supplementing, the entomology major or minor. Various supporting subject areas are open for consideration and must be approved by the supervisory committee and the graduate committee. Although courses may be taken to learn a research tool, courses will not meet the research tool requirement. The student must demonstrate mastery of the research tool to her/his supervisory committee or to other suitable individuals designated by the supervisory committee.

Collateral Field – An acceptable collateral field must include a sequence of courses totaling at least 15 semester hours in a field related to but not overlapping the student's major or minor areas. Credits may not apply toward 90 hours required for a Ph.D. Unless otherwise specified by the supervisory committee, these courses: (1) must be carried in one department and completed with a grade of C or above, and (2) cannot be counted as a part of the graduate program leading to the Ph.D. Undergraduate courses may be included as long as they were not taken to meet a previous degree requirement.

The student's supervisory committee has the prerogative of choosing to administer reading examinations in approved foreign languages and/or examinations to determine proficiency if a research tool or collateral field is chosen as part of the graduate program. The supervisory committee may accept course credit instead of special examination as evidence of satisfactory completion of the foreign language or collateral field requirement.

Minor – The department accepts a formal minor to meet this requirement (credits for a minor do count toward the Ph.D.). The minor must include 15 credit hours with 6 credit hours in courses open exclusively to graduate students (900- or 800-level courses without 400 counterparts), and credits from the master's degree may not apply toward the minor. The minor must be approved by the minor department.

- The Program of Studies for the Doctoral Degree form must be signed by the supervisory committee chair(s) before sending to the Office of Graduate Studies.
- The Office of Graduate Studies will send a copy of the approved Program of Studies to be placed in the graduate student's file in the main office.

Scholastic Grade Requirements

- 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. A grade of B- is not acceptable.
- 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. A grade of C- is not acceptable. NOTE: A grade of B or lower received in a minor course will result in a minor comprehensive being required.

- 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.
- When applied toward an advanced degree program, only courses at the 900 level, or 800 level without 400 or lower counterparts, in the major department or interdepartmental area may be taken on a pass/no pass (P/N) basis. In minor, collateral, or supporting areas of work 800 level courses with 400 or lower counterparts can be taken on a P/N basis. A student failing to receive a minimum acceptable grade for graduate level credit may not continue his/her program of studies without permission of the departmental graduate committee concerned, which may require a special examination to determine the student's qualifications for further work.

Grading Graduate Research and Thesis Hours – The following grading procedures will be used for thesis and dissertation hours:

IP: (In progress) indicates satisfactory work in progress (i.e., student is making progress or effort as determined by the faculty supervisor). The "IP" stands until successful defense and acceptance of the thesis or dissertation, when a P or letter grade is submitted.

XP: (No progress) indicates lack of adequate progress. Because the "XP" grade is not used in calculating the GPA, no direct academic sanction, such as academic dismissal from the University, will be imposed for earning one or more "XP" grades. However, graduate programs may wish to use a series of "XP" grades as a basis for terminating the student from a graduate program.

Note that on the final transcript, the IP and XP grades would count towards attempted hours but for Financial Aid purposes, they would count differently. Both grades would convert to an "I" on the official record, if not graded as P (Pass) or with a letter grade.

☐ **During Second Semester of Residency Hold Second Committee Meeting**

Ph.D. students must meet with their committee during the second semester in residency. There are two main objectives for this meeting. The first is to confirm the proposed course of study and, if changes in courses occur, reasons for the change should be supplied. The second is to evaluate the research proposal. The research proposal will include:

Prepare formal research proposal for presentation to committee. It should include:

Review of pertinent literature – although the literature review will need to be expanded as research progresses, a thorough basic knowledge is necessary to develop sound objectives and a strong plan of attack. The review should be sufficiently complete at this point to guarantee that the committee is comfortable with the student's knowledge of the research area.

Statement of research question – what is needed and what new knowledge will be contributed.

Research objectives – define the specific research objectives to address the research question.

Procedures – for each objective, describe the specific experimental procedures to be followed including experimental design and analysis, schedule of activities.

A revised research proposal (revised in response to committee suggestions) should be placed in the student's folder.

If a student enters school in January and is planning to perform extensive field research that summer, an expanded research proposal is needed for the first semester committee meeting.

☐ **Annual Supervisory Committee Meetings After the First Year**

After the first two committee meetings, the Ph.D. committee will meet annually to review the student's progress. This meeting will include a written summary of the student's progress in course work and dissertation research. Any proposed changes in course work or research direction must be approved by committee action and recorded prior to the change.

- Inform committee of progress in courses and research. Make any necessary modifications to research as needed (and to the Program of Study if necessary; changes will require approval from the Office of Graduate Studies). A written summary of research findings to date is encouraged.
- The major advisor should send a memo to the graduate committee chair indicating that a meeting was held and whether satisfactory progress has been made to date. This will be included in the student's file in the main office. Written summaries should be given to the committee.
- Complete Annual Progress Report (see **Appendix IV**) during the spring semester to submit to the department head. A meeting will be subsequently scheduled.

☐ **Examinations**

- **The Entomology General Exam**. Take and pass (or have previously passed) the Entomology General Exam or the Entomology Certification Board Exam. The exam may be taken up to a total of three times but only one time per semester and once during the summer.
- **The Written Comprehensive Exam**. The objectives of the Ph.D. comprehensive examinations are similar to those for the M.S. degree. However, in addition to being responsible for greater breadth of knowledge in the areas required of M.S. students, a Ph.D. candidate must demonstrate proficiency in a sub-discipline(s) of entomological and/or biological sciences.
  The comprehensive examination consists of a written comprehensive examination followed by an oral comprehensive examination. The oral comprehensive exam should be taken within one month after successful completion of the written comprehensive examination. The report on the results of the comprehensive examination must be filed in the Office of Graduate Studies at least seven months prior to the dissertation defense.
- **Grant Proposal Alternative.** As an alternative option to the written and oral comprehensive examination, with the approval of the student's supervisory committee, students may prepare an original grant following the guidelines for a NSF full proposal (http://www.nsf.gov/pubs/policydocs/pappguide/nsf14001/gpgprint.pdf). No budget or supporting documentation will be required. A public presentation (~40 minutes, followed by question/answer period) and oral examination with their supervisory committee will follow submission of the written proposal. The written proposal and oral examination with the supervisory committee will fulfill the current requirement for both the written and oral exam.
  Topic selection:
  - the focus of the proposal will be significantly distinct from the area of the student's dissertation research (to be evaluated by his/her graduate committee),
  - the student can submit up to three abstracts outlining the proposal to his/her graduate committee for consideration. The abstracts should be no more than one page each and should include: hypothesis, brief background, methods, and expected outcomes,
  - committee approval must be received at least two months before the proposal due date (students should allow two weeks for committee review of abstracts).

In addition to the above options, students can prepare a grant similar to NSF Graduate Research Fellowship or USDA Pre-doctoral Fellowship Program with the approval of the student's supervisory committee. A presentation and oral examination with the student's supervisory committee will follow submission of the written proposal and will fulfill the current requirement for both the written and oral exam.

Proposal Evaluation Rubric

Introduction: Stated the research problem, past work and current understanding in the field.

Specific aims: Provided succinct, clear, logical description of the objectives and plan of action.

Background information and rationale: Clearly stated hypothesis and rationale. Backed it up with published information. Impact of proposed research.

Proposed experiments: Clear experimental set up/tools to solve the defined problem. Proper description of methods/tools. Expected results and possible interpretations. Provided alternative interpretations and advantages of proposed experiments.

Critical thinking: Demonstrated capability for independent research in the area of study and ability to make original contributions to the field.

Broader impact: Demonstrated awareness of broader implications of the research.

CRITERIA	**PERFORMANCE RATINGS**				
	Proposal Unacceptable **NOT approved**	Proposal acceptable **APPROVED**			
Overall rating of the research proposal	***Poor*** – provide explanation and/or suggestions	Marginally acceptable	Acceptable	Very good	Excellent

Specific comments/suggestions:

- **Additional exams.** Additional exams may be required, such as an exam in the candidate's minor field of study or the biometrics exam. The comprehensive exams are developed by the Supervisory Committee and may, but are not required to, include questions from Entomology faculty members and/or the candidate's committee members. The written exams are usually taken after the majority of the student's course work has been completed.
- **The Final Oral Comprehensive Exam.** Present dissertation seminar to the department and defend the dissertation with the supervisory committee. Non-dissertation related questions also may be part of this exam at the committee's discretion.

Application for Admission to Candidacy must occur **at least seven months prior** to graduation. After passing the comprehensive examinations, the supervisory committee will report the results to the Office of Graduate Studies. Once the comprehensive exams are passed and the language/research tool/collateral field/minor requirement is met, the supervisory committee recommends admission to candidacy to the Ph.D. and submits the form to the Office of Graduate Studies for approval. After admission to candidacy, the student must register each academic semester until the Ph.D. is received. **Failure to register will terminate candidacy**.

- File Application for Graduation including the $25 graduation fee, effective for current term only.
- Prepare dissertation by following the Preparing a Thesis or Dissertation. Prior to filing the Application for the Final Oral Examination in the Office of Graduate Studies, present a copy and abstract to the reading committee of the supervisory committee, other than the chair, a **minimum of five weeks** before the final oral exam.
- Final examinations are required for Ph.D. candidates, and they are open to all faculty, staff, and students. The Application for Final Oral Examination must be submitted to the Doctoral Programs Specialist at least **three weeks** prior to the date of the final oral exam. Along with the completed application, a rough draft of the title page and abstract should be submitted. This may be done electronically as an attachment to email. The doctoral specialist will give final oral examination instructions, including how to obtain the Report on Completion, Signature Page, Survey of Earned Doctorates, upload instructions for ProQuest and Digital Commons, and the Electronic Dissertation Information. Some of these are important for the defense so the instructions should be read prior to the scheduled defense.
- Present dissertation seminar to the department and defend the dissertation with the supervisory committee. Non-dissertation related questions also may be part of this exam at the committee's discretion.

Students have 8 years to complete a Ph.D. degree at UNL. Graduate courses expire 10 years after they have been taken.

☐ **Graduation**

- To file the dissertation with the Office of Graduate Studies, refer to the Preparing a Thesis or Dissertation.
- Schedule exit interview with department head.
- Provide the business center a change of address if moving to another city or state (important for mailing the W-2).
- Make sure desk space is cleaned out.
- Return UNL keys to the main office.

Department Voucher Specimen Policy (See **Appendix V** for details).

ENTOMOLOGY

College of Agricultural Sciences and Natural Resources

Revised Sept. 20, 2024
All classes are subject to change

Entomology Department - Curriculum Offered

(Graduate = Black; Undergraduate = Green)

Spring Semester

Even-numbered years

401/801	Insect Physiology (3)**
801L	Insect Physiology Lab (1) (on campus)
403/803	Management of Horticultural Crop Insects (3)*
835	Chemical Ecology of Insect Plant Interaction (3)
896	Indy Study - Stored Products Pest Course (2)
896	Indy Study - Arthropod Vectors of Plant Pathogens (3)

Odd-numbered years

~~109~~	~~Intro to Beekeeping (2)~~
315	Undergraduate Research Seminar (3)
409/809	Insect Control by Host Plant Resistance (3)
415/815	Medical Entomology (3)*
496/896	Independent Study (arrange with advisor) (1-6 cr)

Every year

115	Insect Biology (3)**
116	Insect ID (1)
308	Mgt. of Field Crop Insects (3)
309	Career Experience
395A,B,C	Experiential Learning for Career Dev. (Res, Tch, Ext)
485	Current Issues in Ento (3)
495	Grasslands Seminar (1) (Dave Wedin)
496/896	Indy Study - Intro to Ige sequencing data set generation (3 cr), CCC review
805	Introduction to Entomology (1)*
813	Biological Control of Pests*
414/814	Forensic Entomology (3)*
416/816	Forensic Insect Succession (1)*
818	Insect Identification & Natural History, Lab (4)*
828	Scientific Illustration (3)*
830	Intro to Development of Distance Education Courses (3)
887	Masters Degree Proj. Proposal (1) (CCC review)
888	Masters Degree Project (2-3)* (under CCC review)
899	Masters Thesis (1-10)
905	Entomology Seminar (1)
999	Doctoral Dissertation (1-24)

Fall Semester

Even-numbered years

~~400~~	~~Bio & Class of Insects (4)~~
810	Insects as Educ.Tools in the Classroom (3)*
820	Insect Toxicology (3)**
825	Mgt. of Agro Crop Insects
496/896	Independent Study

Odd-numbered years

300	Toxins in the Environment (3)
~~800~~	~~Insect Biodiversity Lecture/lab (4)~~
806	Insect Ecology (3) (resident & not crosslisted w/ 406)
817	Pest Management Systems (3) (Bradshaw taught)
819	Insect Behavior (3)*
896	Indy Study: Corn/Soybean Prod in No & So America (1)
915	Presentation Methods (3)*

Every year

105	Nat'l History of Arthropods w/ Plants (3)
115	Insect Biology (3)**
116	Insect ID (1)
395A,B,C	Experiential Learning for Career Dev.
805	Introduction to Entomology (1)*
822	Cultural Entomology (3)*
837	IPM in Sensitive Environments (1) *mini-course**
888	Masters Degree Project (4)*
896	Independent Study (1-6)*
896	Indy Study: Molecular Tools for Aspiring Biologists (under CCC review), 3 cr.
406/806	Insect Ecology* (Bingham)
887 & 888	MS Project (under CCC review)
899	Masters Thesis (6-10)
905	Entomology Seminar (1)
996	Research Entomology (1-12)
999	Doctoral Dissertation (1-24)

Summer Term

Even numbered years

409/809	Insect Control by Host Plant Resistance (3)*

Odd numbered years

412/812	Entomology and Pest Management (3)*

Every year

850	Forensic Insect Morphology (1)*
887 & 888	Masters Degree Project (3)* (under CCC review)
896	Independent Study (1-6)**
899	Masters Thesis (1-10)
999	Doctoral Dissertation (1-24)

* Online only

** Online and on campus

( ) Number of credits

Req. Grad. classes: ENTO 800 lec+lab **Or** ENTO 818+lab**;** ENTO 905 (1 Rsch & 1 Non-Rsch for MS & PhD)**; and** 1 prof. dev. course.; Ph.D. - 1 Language/Research/Collateral/Minor

APPENDIX II. AWARDS AND FELLOWSHIPS

Entomology graduate students are eligible for numerous competitive scholarships and fellowships. Some are offered through the department, college, or university, whereas others are from professional societies or other organizations. The department tries to keep track of these competitions and makes every effort to announce the availability of these fellowships in a timely manner via email. However, it is up to you to make sure you are eligible and that you submit the required materials by the due dates. A list of scholarships and fellowships for which entomology graduate students are eligible is listed below:

Administered by the Entomology Department:

- **Fred Clute Memorial Scholarship** – Established for students in the department who have expressed a desire to pursue a career in structural pest management.
- **Stephen D. Danielson Memorial Scholarship** – Undergraduate Insect Science majors or graduate students in entomology (undergrads preferred). Preference given to first-generation students from Nebraska.
- Charles Glenn Murphy Scholarship/Fellowship – Created in Charlie's name to honor his love for insects and help a selected student achieve their dreams to become an entomologist and create a better world.
- Earl and Betha Ramsey Scholarship – Warren and Una Emerson created the Ramsey Memorial Fund to honor Una's parents' lives and in memory of their loving family. The scholarship is need-based and is awarded annually.
- **Myron H. Swenk Memorial Fund** – A scholarship grant-in-aid program designed to provide additional financial assistance to students. Funds are primarily used by students for traveling to professional meetings. The fund was established in 1970 in honor of Myron H. Swenk, Entomology Department Head from 1919-1941, by his sister, Iva B. Swenk, as part of her estate. The Nebraska Foundation manages the fund by investing the principal in appropriate financial instruments. Interest accumulated on these investments is available to students. The Executive Committee of the Bruner Entomology Club, under the guidance of the club's faculty advisors and the department head, review requests for scholarship grant-in-aid and authorize the allocation of funds. Application forms are available from members of the Bruner Club Executive Committee.

Administered by UNL:

- Folsom Distinguished Master's Thesis and Dissertation Awards – Recognize the outstanding research and creative accomplishments of UNL graduate students. The recipient of the Distinguished Master's Thesis Award will receive a $500 honorarium and a commemorative medallion. The recipient of the Distinguished Doctoral Dissertation Award will receive a $1,000 honorarium and a commemorative medallion.
- Graduate Fellowships – The Office of Graduate Studies holds an annual competition for current graduate students who may apply for fellowship assistance for the next academic year. Awards range from the Presidential and Fling Fellowships (full funding, tuition remission, health insurance and some fees for one year) to smaller fellowships. Applications are due in early February.
- Hardin Distinguished Graduate Fellowship ($3,000 plus $2,000 for program enhancement, e.g., travel) – For graduate students conducting research in the general area of plant physiology (with particular emphasis on genetic mechanisms influencing plant responses to stress conditions) is eligible for nomination.

- Holling Family Teaching Assistant Award ($1,000) – The Holling Family Award Program for Teaching Excellence was made possible by a gift from the Holling family to honor their pioneer parents. John Holling was a 1912 electrical engineering graduate of the University of Nebraska-Lincoln and his brother, Gustave Holling, attended the College of Agriculture before farming the family's land in the Wood River area. Awarded annually by the College of Agricultural Sciences and Natural Resources, Extension, and the Nebraska College of Technical Agriculture (NCTA).

- Larrick/Whitmore Graduate Student Travel Grant – Supports graduate student travel to professional and scientific meetings. The deadlines for submissions are early April (for travel June 1 to September 30), early September (for travel October 1 to January 31) and early January (for travel February 1 to May 31). *Students may only receive one travel grant per degree program (one for M.S. and one for Ph.D.)*. Awarded by the Agricultural Research Division.

- Life Sciences Fellowship – In recognition of outstanding performance as a graduate student. Life Sciences are defined as the scientific study of living organisms and life processes. Fellowship is $5,000 awarded by the Agricultural Research Division.

- Mary and Charles C. Cooper/Emma I. Sharpless Fellowship – This fellowship was established to recruit exceptional graduate students capable of benefiting from further education into the College of Agricultural Sciences and Natural Resources. Funds are to be used to supplement an existing assistantship with offers of $3,000 for M.S. and $5,000 for Ph.D. students.

- Milton E. Mohr Awards Program – Offers graduate fellowships ($1,000) for graduate students enrolled in biotechnology-oriented programs. Applications are due to the department in mid-March.

- Outstanding Graduate Research & Creative Activities Award – Recognizes the excellent quality of research and creative activity carried out by UNL graduate students. Two recipients will receive a medallion and cash award of $1,000.

- Outstanding Graduate Teaching Assistant Award – Honors graduate teaching assistants who have demonstrated special effectiveness in teaching undergraduates in a variety of settings. Recipients will receive a commemorative medallion and a cash award of $1,000.

- Shear-Miles Agricultural Scholarship and Fellowship – The $2,000 award is added to the stipend of outstanding graduate students. Nominations are due to the Agricultural Research Division in mid-May.

- Graduate Studies Travel Grants – Provides support for student travel to present at professional conferences as well as student travel for work directly related to dissertation/thesis projects. The award will assist Nebraska graduate students in sharing their scholarly and creative work beyond our state lines. Application is due at least 6 weeks prior to travel.

- Graduate Student Assembly (GSA) Travel Awards Program (GTAP) – Undergrad and graduate students at the University of Nebraska-Lincoln who are presenting original work at an academic conference, or who are attending an artistic competition/showcase or workshop, are eligible to apply for a GTAP grant. Students must be in good academic standing; the student's adviser is required to sign off on the application.

- Widaman Trust Graduate Fellowship ($2,000 award) – Awarded to students conducting research in agriculture and medicine. Nominations are due mid-May.

Administered by Professional Organizations:

- The Entomological Society of America, International Congress of Entomology, and the North Central Branch-ESA – Provide numerous awards, honors, and scholarships as well as oral and paper competitions for outstanding graduate students.

- **Outstanding Graduate Student Award** – Awarded by the Nebraska Chapter of Gamma Sigma Delta, graduate students in human sciences, agriculture, and related sciences are eligible to apply who have demonstrated outstanding accomplishment in their teaching, research, or extension endeavors, and great promise for future academic contributions in their field of expertise.

APPENDIX III. POTENTIAL PROFESSIONAL DEVELOPMENT COURSES AT UNL

AGRO/HORT 803, PLAS 403. Scientific Writing and Communication. 3 cr.
Reading and critiquing, writing, and presenting scientific information. Use research data to compose a manuscript in standard scientific format and prepare and present a poster to a general audience. Ethical issues in research and writing.

ALEC 412/812. Multimedia Applications for Education and Training. 3 cr.
Practical applications in developing and evaluating multimedia resources for students. Surveys new applications, creates and develops various instructional materials, and reviews current practice against relevant theory. Use current software packages to develop materials for various audiences.

ALEC 805. Advanced Teaching Strategies. 3 cr.
Contemporary and innovative teaching strategies, emphasizing learner-centered instruction, suitable to teaching in college and postsecondary institutions, outreach programs, public schools, and other settings. Students participate in active learning as they apply learning theory in practice, prepare and demonstrate teaching methods, and plan for instruction in discipline areas of their choice.

BIOS 830. Communicating Science through Outreach. 3 cr.
Introduction to science communication, formal versus informal science education, and best practices in informal science education. Review of state and national science standards and how students learn. Introduction to informal science practitioners and facilities in Nebraska. Role playing and development and implementation of hands on, inquiry-based science activities. Training in evaluation and assessment.

ENTO 915. Presentation Methods. 3 cr.
This course prepares entomology graduate students to give scientific and public presentations. It includes instruction in preparing posters and on-screen shows, image editing, finding entomological resources in libraries and on the internet, insect photography, and public speaking. Students develop a portfolio of their work, and they make two 12- and one 30-minute presentations to their classmates.

ENTR 888. Entrepreneurship and Enterprise Development. 3 cr.
The process of starting your own enterprise. Competitive environment, risk management, finance for business startups, funding, and business plan writing.

NRES 841. STEM Education Seminar. 1-3 cr.
Acquire familiarity with the broad range of current STEM education research, outreach, and other activities taking place at UNL and across the nation in order to build a larger context for and connections to one's own STEM research and activities.

APPENDIX IV. ANNUAL REVIEW OF STUDENT PROGRESS Due 20 February 2026
UNL ENTOMOLOGY DEPARTMENT

Student Name: _____

Date Studies Began: _____ Projected Graduation Date: _____

Dates of Committee Mtgs: _____ _____

_____ _____

_____ _____

Dates when Environmental Health and Safety (EHS) and Departmental Training were completed:

EHS Core – Injury and Illnesses Prevention Plan (IIPP) _____

EHS Core – Emergency Preparedness Training _____

EHS Chemical Safety Training _____

Departmental (e.g., autoclave) _____

Checklist of Student Progress

Master of Science		Doctor of Philosophy	
Advisor(s)		Advisor(s)	
Committee Members		Supervisory Committee Members	
	Date	Date Committee Approved by Graduate Studies	
Memorandum of Courses Approved (copy attached)		Program of Studies Approved (copy attached)	
Research Proposal Submitted		Research Proposal Submitted	
General Entomology Exam Taken		General Entomology Exam Taken: (if not already taken during MS program)	
Comprehensive Exam Completed		Comprehensive Exam Completed	
Thesis Defense Completed		Admission to Candidacy	
		Dissertation Defense Completed	
Thesis / Dissertation Working or Actual Title			
Voucher Specimens were submitted	Plan Approval (copy attached) Date vouchers submitted		

Objectives

LAST YEAR'S GOALS

NEXT YEAR'S GOALS

ACCOMPLISHMENTS / EXPERIENCES

A. Research

B. Outreach (presentations, guest lectures, conference)

C. Citizenship (BugFest Open House, Bruner Club participation, e.g., committees)

D. Publications, Presentations, and Grants

E. Educational Training, e.g., teaching, extension

REQUIRED SIGNATURES

Student	Date	Co-Major Advisor	Date
		Co-Major Advisor	Date

Reminder to attach a copy of current CV

APPENDIX V. DEPARTMENT VOUCHER SPECIMEN POLICY

It is the policy of the Department of Entomology that advisors and graduate committees ensure that students deposit voucher specimens resulting from their research in a suitable repository prior to departing the University. Without this physical evidence, research may not be verifiable. Faculty and staff also need to deposit voucher specimens resulting from their research in a similar manner. Recent instances in our department have shown important research to be questioned or considered invalid, because voucher specimens were unavailable. **Lack of vouchers renders published results unverifiable.**

What is a Voucher Specimen? A voucher specimen is an organism or part thereof preserved to document data in published reports. Voucher specimens of arthropods serve as a future reference for published names used in scientific publications. Authoritatively identified voucher materials (specimens, samples) should be routinely designated to document the identity of organisms involved in studies ranging from basic research to complex environmental surveys. Failure to deposit good quality voucher materials in an established, permanent collection, and to cite the repository in subsequent publications, seriously compromises the reliability, accuracy, and repeatability of otherwise good research. Voucher specimens are especially needed for organisms that cannot be definitively identified at the time the study is reported. Even for seemingly well-known species, there is always the possibility of a taxonomic change, such as recognition of cryptic species. Voucher specimens ensure the credibility and permanence of research results, because they document the identity of the organisms that were studied.

Many journals, including those of the Entomological Society of America, require a statement in the published article addressing voucher specimens. For example, author guidelines for the Annals of the ESA state: "Authors are required to deposit voucher specimens in an established, permanent collection and to note in the published article that the expected deposition has been made, its location, and the collection accession number. Authors should contact the curator of a voucher repository before deposition concerning the procedures required for curation to ensure that the collection will accept the voucher materials. The designation and proper labeling of voucher specimens is the author's responsibility. When available, at least three specimens should be deposited. Each specimen should have the following information provided at the time of deposition: (1) standard label data that are required for the specimens collection (*i.e.*, locality, date of collection, collector, host, ecological data, whether the specimen is from a laboratory collection, etc.); (2) an identification label that includes the identifier and date of identification; and (3) a label that designates the specimen as 'voucher.'"

The Systematics Research Collections at the University of Nebraska State Museum are a suitable (and geographically logical) place for you to deposit properly prepared, pinned or slide mounted specimens. However, any permanent museum collection and/or a permanent ultra-cold facility for DNA is suitable. Assistance and guidelines on how to prepare voucher specimens may be obtained in ENTO 400 and ENTO 800 classes from Dr. M. J. Paulsen in the Museum, other curators at other institutions, or from literature sources.