Texas A&M University

Toxicology Graduate Student Handbook



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INTRODUCTION

Welcome to the IFT

Graduate degrees in Toxicology are offered through the Interdisciplinary Faculty of Toxicology (IFT) under the guidelines proposed for graduate studies by Texas A&M University (refer to the TAMU Graduate Catalog for complete guidelines). Toxicology research and training at TAMU was initiated in 1970 by the Department of Veterinary Physiology & Pharmacology and was extensively reorganized in the late 1980s to reflect the interdisciplinary nature of the environmental health research and training activities on campus. The IFT was formally recognized as a degree-granting program in 1990.

The research activities of individual faculty are highly diverse and are focused on one or more of the following areas of research: (i) Regulatory Science, (ii) Cellular and Molecular Toxicology, (iii) Reproductive and Developmental Toxicology, (iv) Behavioral and Neurotoxicology, (v) Environmental Toxicology and Food Safety. In addition, many faculty collaborate extensively, thereby allowing the possibility for a student to cross-train in more than one area.

The IFT is composed of over forty faculty members from Texas A&M University (TAMU), Texas A&M Health Science Center (TAMHSC) and affiliated laboratories, the Office of the Texas State Chemist (OTSC), the Texas Veterinary Medical Diagnostic Laboratory (TVMDL), and the USDA Food Animal Protection Research Laboratory (FAPRL). We are administratively linked to the Department of Veterinary Integrative Biosciences (VIBS) in the College of Veterinary Medicine and Biomedical Sciences (CVM). Figure 1 illustrates this structure.

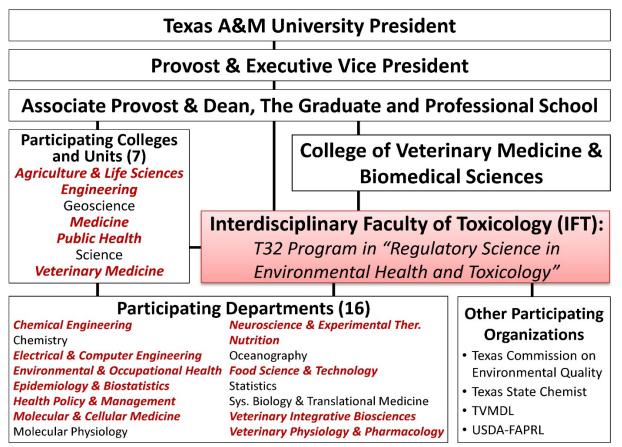


Figure 1. Organizational Chart of the Interdisciplinary Faculty of Toxicology.

SECTION A – GRADUATE STUDIES IN TOXICOLOGY

Admissions

Entrance in the graduate program begins in the FALL semester. Applications are accepted between September and February and applicants are encouraged to apply as early as possible. Applications from US citizens and resident aliens submitted before January 15 will be considered for institutional fellowships. The final deadline for application submission is March 1. An extensive description of the application procedure is provided on the Toxicology website at: https://toxicology.tamu.edu/apply/application/

Incoming students should have undergraduate training in chemistry and/or any of the biological and life sciences. Specifically, most of our first-year students will have already had two semesters of Biochemistry (equivalent to BICH 410/411 at TAMU), two semesters of Organic Chemistry, and one semester of Calculus. This background is considered essential for students in the doctoral program. Students lacking any of these prerequisites may be required to enroll in the necessary course(s) during the summer prior to the first year and earn a grade of "B" or above; or plan to take additional courses as electives in their 2nd year in the program.

Application access and additional applicant information may be obtained from the <u>Office of Admissions</u> or <u>GraduateCAS</u>. Admission to Texas A&M University and its sponsored programs is open to qualified individuals regardless of race, color, religion, sex, age, national origin or educationally unrelated handicaps.

Course Requirements

Degree plans for individual students vary depending on the student's background and research focus. Doctoral students normally complete 36 hours of coursework and 60 or more credit hours of research. The toxicology program emphasizes research as most students are placed in laboratories during their first semester and continue to conduct research while they complete coursework.

<u>All students in the Ph.D. and M.S. programs are required to complete the core courses listed in Table 1.</u> Elective courses may be selected, in consultation with the student's mentor and doctoral committee members, from courses which provide additional expertise in specialized areas within the relevant sub-disciplines such as Mechanistic Toxicology, Data Science and Modeling, Epidemiology, Community Engagement, Environmental Chemistry, Biomedical Engineering and Public Policy.

Course adjustments to the IFT core requirements are permitted only with the approval of the IFT Chair or Vice Chair. Exceptions, waivers or other forms of adjustment to the core course requirements shall be petitioned through (i) program manager and (ii) relevant course instructor to the IFT Chair or Vice Chair. Generally, a memorandum shall be submitted explaining the circumstances and reasons for course adjustment request. The memo shall be accompanied by a justification that may include relevant prior course syllabi and other materials. Each course requires a separate memorandum. The IFT reserves the right to make any changes in requirements it may consider necessary and desirable by due notice in the Graduate Student Handbook.

Seminars

<u>All</u> Toxicology students are expected to attend the weekly IFT seminars (VTPP 681) at 3:30 PM each Monday during the fall and spring semesters. These seminars provide graduate students with an excellent opportunity to broaden their research perspectives, and to interact with speakers in small group settings. Students in their 3rd or higher year in the doctoral program are **required** to present a seminar once per academic year.

Table 1: TOXICOLOGY TRAINING CURRICULUM

	Course name	Course#	Credits	Course description	Schedule
	Metabolism-Dependent and -Independent Mechanisms of Toxicity	VTPP 673 CRN 20000	3	Metabolism of drugs, toxicants and carcinogens; factors that alter expression of drug-metabolizing enzyme genes; gene polymorphisms; mechanisms of action of xenobiotics and pathways of toxicity and carcinogenesis.	W 3:30-6:30 PM VRB 423
– Year 1	Chemical Hazard Assessment	PHEO 605 CRN 22133	3	General principles of exposure assessment; chemical and biological methods for testing hazardous chemicals and complex mixtures; chemical analysis; microbial bioassays.	MW 2:00-3:15 PM SPHC 110
Fall Semester – Year 1	Principles of Human Health Risk Assessment of Chemicals	VIBS 641 CRN 31966	3	Use of different types of data and analysis approaches to conduct both qualitative and quantitative assessments of human health hazard; general overview of how risk assessment informs risk management decisions.	12:25PM
F	Experimental Design in Biology	BIOL 683 CRN 45087	3	Design of scientific research projects in the field of biology; a wide range of biological experiments designed with the appropriate statistical technique for analysis; design biological studies that are statistically tractable and perform basic statistical analyses using the statistical programming language R.	BTLR 309
	Advanced Toxicology	VIBS 670 CRN 14519	3	Toxic effects of drugs and chemicals on major mammalian organ systems, case studies of toxic effects of environmental exposures.	M 12:00-2:30 PM VIDI 121
– Year 1	Pharmacology	VTPP 625 CRN 35658	3	Introduction to pharmacokinetics and pharmacodynamics; survey of major classes of pharmaceutical agents; uses, mechanisms of action and adverse reactions of drugs.	TR 9:35-10:50 AM VENI 101C
Spring Semester – Year 1	Practice of Evaluating Human Health Risks of Chemicals	VIBS 645 CRN 35857	2	Decision contexts in risk assessment; data requirements in each of these decision contexts; integration of knowledge across epidemiology, toxicology, exposure assessment and other disciplines into the process of making decisions about safety or hazard of chemicals.	M 8:20-10:00 AM VIDI 121
łs	Scientific Ethics	VMID 686 CRN 19640	1	Ethical issues of research and methods for resolution of such issues; conflicts in dissemination of research findings, pursuit of resources, interactions with the press and the broader public, and research translation.	W 1:35-3:35 PM VENI 101A
Fall Semester – Year 2	Histology	VIBS 602 CRN 12822	4	Comprehensive appreciation for the cell and organ physiology and pathophysiology through the study of microstructures. Students will master the ability to examine and identify microscopic features of the various cells, tissues and organs of mammals, and directly correlate these with physiological function and disease states. A significant focus of the course is to learn how cells, fibers and extracellular matrix interact mechanistically to support important physiological functions within the organ systems within the body.	TR 9:00-10:30 AM VENI 107B 10:30 AM-12:00 PM VICI 321
Fall Se	Journal Club	PHEO 681 CRN 42586	1	Review and discussion of contemporary toxicology literature	F 9:10-10:00 AM SPHC 108
	Toxicology Seminar	VTPP 681 CRN 12202	1	Review and discussion of current scientific work in toxicology, physiology and related subjects.	M 3:30-4:30 PM VENI 107B

Sample Elective Courses:

CVEN 601 Environ. Engineering Processes III (Fall) HPCH 603 Social & Behavioral Det. of Health (Fall) PHEB 602 Biostatistics I (Fall)
 PHEB 603
 Biostatistics II (Spr)

 PHEO 630
 Environ. & Occupational Diseases (Fall)
 PHEO 645 Hlth & Safety Hazard Waste Sites (Spr) VIBS 607 Applied Epidemiology (Spr)

VIBS 611 Tumor Cell Biology & Carcinogenesis (Spr)

VIBS 619 Food Toxicology (Fall) VIBS 660 Reporting Science & Technology (Fall)

VIBS 663 Biomedical Reporting (Fall) VIBS 664 Risk & Crisis Reporting (Spr) VIBS 690 Theory of Research (Spr) VPAT 640 Advanced Mechanisms of Disease (Fall) VTMI 649 Immunology (Fall) A Toxicology Journal Club course, PHEO 681 has been added, and students are highly encouraged to attend it as well. It is currently offered on Friday mornings during both the fall and spring semester. This course covers contemporary literature in toxicology an environmental health, as well as the applications to research and industry.

Toxicology Program Annual Meetings and Regulatory Science Symposium

All Toxicology students gather annually in August or early fall to present their research findings to their peers, professors and a panel of judges in poster or oral format. Prizes are awarded for the most outstanding presentations.

SECTION B - THE DOCTORAL PROGRAM

Doctoral Program

Students are required to complete the core curriculum in Toxicology. A minimum of 64 semester credit hours are required beyond the MS level or 96 semester credit hours beyond the B.S. level to earn a Ph.D. Near the end of the coursework portion of the program, students take a preliminary exam intended to assess knowledge and competence in toxicology and related fields. Students passing the preliminary exam are admitted to candidacy for a Ph.D. degree. <u>All students are required to maintain a GPA of 3.00 or higher at all times to remain in good standing in the program. A grade of D, F or U in any course work on the degree plan must be repeated at TAMU and the student must earn a grade of C, S or higher. All requirements for the degree must be completed within 10 consecutive calendar years. Course work more than 10 calendar years old at the time of the defense may not be used to satisfy degree requirements.</u>

Courses / Continuous Enrollment

Prior to or during orientations, each student will meet with the graduate advisor to determine which courses they will take during the first year. Students receiving assistantships or fellowships must register for a minimum of 9 credit hours in both the fall and spring semesters, and 6 credit hours during the summer. *Note: Transcripts for all previous degrees and any transfer work must be on file with the University prior to registering for first semester courses.*

Laboratory Rotations

Students who have not previously identified a research advisor will undertake up to two semester-long lab rotation periods in the first year. Rotations offer exposure to different fields of Toxicology. They also allow one to experience the research environment of a specific lab prior to committing to complete doctoral research there. Availability of rotations is dependent upon the availability of funding to support rotations, and the particular trainee's circumstances.

The Program Coordinator arranges the rotation schedule for students entering the program. This is coordinated with the student and professors. Students should refer to the faculty research interests lists to select professors whose research programs best fit their own interests. The Program Coordinator assists with matching those requests as closely as possible with professors desiring new students. All efforts are made to accommodate the student's choices; however, this may not always be possible if professors are not accepting students.

During rotations, it is the student's responsibility to arrange sufficient time to fully participate in lab activities. Typically, this includes discussions with the faculty member, contribution to ongoing research projects, attendance at lab meetings, and acquisition of specific technical skills specified by the faculty member.

Selection of a Mentor

Each student <u>must</u> select a mentor from the Toxicology faculty by the time they complete rotations (usually the end of their first year in the program). A mentor is a faculty member who serves as an advisor, supporter, sponsor and role model. A mentor is expected to interact with the student on a regular basis providing advice, guidance and intellectual challenges needed for the student to grow and develop and to complete the degree program. The student should look at both the professional and personal aspects of their intended mentor. Selection of a mentor requires a great deal of thought and consideration and may be the single most important decision of a student's graduate training. Ask questions and seek honest and probing answers from the prospective mentor and others. Consultation with the Program Coordinator is required before making the final

choice. The Program Coordinator will announce final placement of students in their respective laboratories after obtaining approval from all involved faculty.

When considering a prospective mentor's professional aspects, ask these questions:

- What is his/her reputation outside the University? This will be important when seeking a job upon completion of graduate school.
- Does the prospective mentor have funding available to support a stipend and research?
- How does his/her lab operate and how do students fit in? In some labs, the mentor is very involved in the daily operations, while in others, lab managers or research assistants assume much of that responsibility.
- What professional requirements does this mentor require in areas such as work habits, sharing of ideas, ethics, lab meetings and paper authorships?

These questions may be useful when considering personal aspects:

- Are the personalities of the prospective mentor and student compatible?
- Do the mentor and student meet each other's expectations and needs?
- What do other students and faculty think of this prospective mentor?

<u>NOTE:</u> Each doctoral trainee in the Toxicology program must find a mentor who agrees to supervise student's doctoral research after rotations are completed, but no later than the end of the summer semester in the 1st year in the program. Failure to identify a mentor will result in dismissal from the doctoral program. Selection of a mentor does not guarantee financial support and trainees are encouraged to discuss the availability of funding with prospective mentors.

Graduate Advisory Committee

Within the first year in the program, the student forms an advisory committee. The advisory committee must consist of <u>four or more members</u> of the graduate faculty representative of the student's field of study and research and <u>must include at least one member from a different department</u>. The committee members should reflect a broad prospective. The student's mentor is the Chair of the advisory committee, and he/she is usually helpful in suggesting other potential committee members. All advisory committees must be approved by the **Graduate and Professional School (Grad School)** as part of the student's Degree Plan. Once formed, the advisory committee meets <u>at least once each year</u> to monitor and direct the student's progress and ensure open lines of communication between the student and the committee.

Degree Plan

The degree plan serves to establish the official advisory committee and states the coursework for the doctoral degree. The University requires the degree plan to be submitted to the Grad School <u>prior to registering for the fourth regular semester</u> (excluding summer semesters). For most students, this translates to submission of the degree plan early in the third full semester, as time is required for approval. The Grad School blocks registration for students who fail to submit a degree plan by this deadline. Formulation of the Graduate Advisory Committee also occurs at this time as committee members are listed on and must also approve the degree plan. Degree plans are submitted through the <u>Document Processing Submission System</u> or DPSS. It is recommended that students meet with the Program Coordinator prior to submitting the degree plan to make sure the program requirements have been addressed and avoid rejection of the degree plan at that level.

Scientific Meetings

Attending scientific meetings is an integral part of being a professional scientist. Researchers learn about results before they are published, exchange ideas, receive continuing education instruction, and begin building a professional network. All students are strongly encouraged to attend regional and national meetings. Many national meetings offer placement services which can help senior students secure post-graduate employment. The IFT provides travel awards, budget permitting, for graduate students to attend the annual Society of Toxicology (SOT) meeting, the regional Lone Star Society of Toxicology (LSSOT) meeting and other specialized conferences. Students may only receive one IFT travel award per year, presentation of research data is required to obtain funding, and the IFT support must be acknowledged in the presentation. Students should consider membership to the professional societies in their research field, and also apply for all travel awards for which they are eligible. Other sources of travel funds may be the society hosting the meeting, the student's College level graduate student organization (i.e. CVM GSA), the Grad School, the Graduate Student Council (GSC), the Bush School, and others. It is your responsibility to apply for these awards.

When using IFT funds for Travel

- Coordinate through the IFT Program Coordinator and the Departmental Travel Liaison to purchase airfares. DO NOT PURCHASE A TICKET using personal funds.
- Make sure that each person's name is listed on the hotel receipt, and that the receipt shows payment for each person in the room, and zero balance to ensure proper reimbursement.
- Keep all receipts and organize them by date prior to submitting them for reimbursement.

English Language Requirement for International Students

The English proficiency of all TAMU students whose primary language is not English must be <u>verified</u> prior to taking a preliminary examination, final examination or defense. Verification is the minimum standard of English proficiency and may be achieved in the following ways:

- Official TOEFL/TOFI score of \geq 80 that is no more than two years old
- Official GRE Verbal score of \geq 146
- Official IELTS score of ≥6.0
- Come from a country on the recognized list of countries who instruct in the English language

Any student not meeting one of these criteria MUST take the English Language Proficiency Examination (ELPE) or request that the program submit a waiver on their behalf if there are no plans that they will be a teaching assistant. The ELPE is given at the beginning of each semester for incoming international graduate students, and also at other times of year for those needing to retest. The exam takes several hours to complete.

Before a student is eligible to serve as a Teaching Assistant (GAT), they must become <u>certified</u> in English. Certification can be obtained by:

- Scoring ≥ 80% on each section of the English Language Proficiency Examination (ELPE)
- Obtaining grades of A or B in the Center for Teaching Excellence (CTE) English courses
- Receiving a bachelor's degree after four years of study at an accredited U.S. institution

Teaching

Typically, TOXI graduate students are not assigned TA duties. If a student wishes to TA or is asked to do so by his or her mentor in order to receive a stipend, he or she must secure a TA position with the help and

permission of their mentor. International students serving as TAs must first be certified in English proficiency.

Residence Requirements

Texas A&M University requires that doctoral student with baccalaureate degrees <u>must spend a minimum of</u> <u>two academic years in resident study</u>. Students who hold master's degrees when they enter doctoral programs must spend a minimum of one academic year in resident study.

Petitions

In the course of a graduate career, it is sometimes necessary to request changes in the approved degree plan on file with the Grad School, changes to a graduate advisory committee or other graduate processes. This is accomplished by submission of a petition through DPSS. The petition will route for approval to the Program Coordinator, Graduate Advisory Committee, Toxicology Chair and finally the Grad School.

99 Doctoral Hours Cap

The IFT has been granted a Programmatic Exemption increasing the Ph.D. in Toxicology at TAMU from 99 to a maximum of 130 doctoral G8 Semester Credit Hours (SCH). Once a student accumulates 130 or more hours, no exemptions are allowed, and even Texas residents will be forced to pay non-resident tuition. The first 30 hours for any student without a recognized MS degree are assigned the G7 level, while hours above 30 are at the G8 level. Students entering the program with a recognized MS degree start at the G8 level.

Proposal

All doctoral students are required to submit a dissertation proposal as part of the Ph.D. requirements. The proposal should explain the rationale or approach and the planned methodology of the student's research project. A well-written proposal is organized according to NIH Grant Guidelines and should include four sections: 1) specific aims, 2) background and significance, 3) experimental design and methods, and 4) literature cited. The proposal should be submitted at approximately the same time as completion of the Preliminary Examination, usually the summer of the second year in the program. The proposal requires the approval of the Graduate Advisory Committee and the IFT Chair, and routing of the approval page through the IFT Office. The course VIBS 690, Theory of Research, is helpful for developing the research proposal. Further recommendations on preparation of the proposal are available <u>here</u>.

Preliminary Examinations

All doctoral students must successfully complete the preliminary examination, also known as a qualifying examination. Preliminary Examinations consist of written and oral components as required by the TAMU Graduate and Professional School. <u>University rules dictate that preliminary examinations should be given in the semester after coursework is completed</u>. They can be done earlier so long as no more than 6 credit hours of formal coursework remain (excluding seminar, directed studies or research hours, 681, 685 and 691 respectively). *Note: After passing the required preliminary examination, all remaining requirements for the degree must be completed within four calendar years, or the preliminary exam must be repeated*.

The Texas A&M University graduate catalogue language pertaining to the preliminary examinations reads: "The format of the preliminary examination shall be determined by the student's department (or interdisciplinary degree program, if applicable) and advisory committee, and communicated to the student in advance of the examination. The exam may consist of a written component, oral component, or combination of written and oral components. The preliminary exam may be administered by the advisory committee or a departmental committee; herein referred to as the examination committee."

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The student's Graduate Advisory Committee will determine the format for a written exam, and the group collectively administers an oral exam. All written and oral components must be completed within a <u>three-week</u> <u>period</u>. Each member of the Graduate Advisory Committee must be consulted in scheduling the exams. Typically, the date and time for the oral exam is selected based on the committee members' availability, and once this is established, the written examinations are scheduled with each member, or the committee as a whole. Upon successful completion of the written examinations, the oral exam is conducted before the Graduate Advisory Committee.

The student is advised to inquire about the format and possible content of the exam when scheduling with each committee member. Committee members have the opportunity and obligation to require the student to display a broad knowledge of the chosen field of study and sufficient depth of understanding in areas of specialization. While discussion of the proposed dissertation research is important, such discussion cannot be used to satisfy the requirements of the Preliminary Examination. The committee must attest that the student has demonstrated the professional level of knowledge expected of a junior academic colleague.

The objectives of the preliminary doctoral examinations are:

- To determine if the student has attained adequate breadth of knowledge in toxicological sciences
- To determine whether the student has attained a sufficient depth of knowledge in selected subdisciplines, including knowledge of the literature, concepts and experimental approaches in the area of specialization
- To assess the student's ability to think clearly and independently about the toxicological sciences and to express these thoughts in both written and oral formats
- To satisfy requirements of the Graduate and Professional School

Students are advised to work with the Toxicology graduate advisor to complete the "Preliminary Examination Checklist" and "Report of the Preliminary Examination" forms, and for scheduling rooms. The forms require signatures of committee members as well as the IFT Chair, and students must meet eligibility requirements to take the exam.

Within ten days of successful completion of the oral exam, the graduate advisory committee members will approve the Report of the Preliminary Examination form which ultimately routes through the IFT Office and to the Graduate and Professional School. The Grad School will conduct a post-review of the examination results and eligibility requirements. In the event the student fails either portion of the preliminary examinations, the advisory committee may elect to reschedule that portion after at least three months of additional preparation. Alternatively, the student may be assigned to, or elect to change to the Master of Science degree.

Candidacy

A student must meet the following requirements to be admitted to Ph.D. candidacy:

- Lack completion of no more than six credit hours of formal course work on the degree plan (excluding 685 or 691 hours)
- Have ≥ 3.00 graduate and degree plan GPAs with no degree plan course grade lower than a C
- Have passed the written and oral portions of the preliminary examination
- Have met the residence requirements

Defense of the Dissertation / Final Examination

The final steps in obtaining a Ph.D. are the writing and defense of the dissertation. The student should discuss the status of the research with the advisory committee before beginning to write the dissertation. When the student, advisor, and advisory committee agree on a time for submission and defense of the doctoral dissertation, the "Request for Final Examination" form must be submitted to the Grad School at least two weeks prior to the requested date.

At the start of the semester in which the student plans to graduate, they must apply for the graduate degree and pay a diploma fee. Important University deadlines for each semester can be found on the graduate calendar.

The dissertation must be given to members of the advisory committee at least <u>two weeks</u> before the scheduled defense. The defense of a dissertation includes a public seminar. The student and research advisor must schedule the defense with this requirement in mind. All the Graduate Advisory Committee members must attend the defense. In addition, the Toxicology Program Coordinator must be notified of the date, time, place, and title more than two weeks beforehand to assist with room scheduling, completion of the "Request for Final Examination" form, and to allow sufficient time to advertise the defense seminar.

Submission of Dissertation

Upon passing the Final Exam, the student is required to submit the dissertation to the Thesis Office and the "Written Dissertation or Record of Study Approval" form to the Grad School. The Thesis Office ensures that each dissertation adheres to the University's formatting standards. They offer workshops and provide advice during the writing process, and they publish the Thesis Manual which includes the format rules. They also offer a pre-submittal review, and review submitted theses and dissertations for final copy. Rules and procedures for submission of the completed thesis, with the appropriate approvals, and the Thesis Manual can be found at <u>http://thesis.tamu.edu/</u>.

It is highly recommended that each student attends a pre-submittal conference. Dissertations are required to be submitted as a single PDF file, and a signed approval page must be delivered to the Thesis Office. <u>Both the PDF file and the approval page must be submitted by the deadline announced in the graduate calendar.</u>

Full Course Waiver

When students have only their defense to complete and will not be on Texas A&M payroll the entire semester (i.e. no assistantship or fellowship), they may register for one credit hour of research and be reclassified as a temporary research assistant. The provision is the same for students who have defended but not graduated. This requires the knowledge and approval of the committee chair and employing department. For international students, all full course waivers must be preapproved by the International Student Services (ISS) office to ensure the student stays in legal status. *Note that a full course waiver does not qualify a student for a tuition waiver.*

Graduation

Students must apply for graduation at the beginning of the semester in which they expect to graduate by applying for a degree online in the Howdy portal by the deadline published in the graduate calendar. The graduation fee (also called diploma fee) must also be paid early in the semester. A late fee will be added if the fee is paid past the published deadline. In the event your application is canceled after the deadline, the fee will not be refunded. During the semester, a Mandatory Confirmation of Attendance at Commencement Ceremonies will be sent via e-mail, and will include information about the ceremony, options for being hooded by the committee chair and how to obtain a cap and gown for the ceremony.

Regulatory Science in Environmental Health and Toxicology Training Program: Year 1 Training Timeline for Doctoral Students

Timeline	Activities	Who to contact with questions	Notes
May-August	 Select 2 rotation laboratories (Fall & Spring) Register for Fall courses (12 hours) 	Kim Daniel Training faculty	Register at: <u>howdy.tamu.edu/</u>
Mid-August	TAMU Graduate student orientation	Kim Daniel	Register at: grad.tamu.edu/
August- September	 Attend IFT annual retreat/forum Meet with Dr. Chiu to discuss externship opportunities & application 	Kim Daniel Weihsueh Chiu	
September- December	 Conduct rotation #1 Take core courses Attend IFT seminars (Monday @ 3:30 PM) Attend Tox Journal Club (Fri @ 9:10 AM) Register for Spring courses (November) 	Rotation #1 advisor Kim Daniel	<u>Fall Core Courses</u> : VTPP 673 (3 hrs) PHEO 605 (3 hrs) VIBS 641 (3 hrs) BIOL 683 (3 hrs)
No later than December 31	Submit Research Rotation form (#1)	Kim Daniel	Obtain form from Kim Daniel
January-May	 Conduct rotation #2 Take core courses 1st year committee meeting (review courses, rotations, externship plans; late spring) Apply for externships (January-March) Attend IFT seminars & Tox Journal Club Register for Summer courses (externship, 6 hours) and Fall courses in April (remaining core courses and electives based on trainee preference, selected in consultation with advisor and advisory committee) 	Rotation #2 advisor Kim Daniel Weihsueh Chiu	Spring Core Courses: VIBS 670 (3 hrs) VIBS 645 (2 hrs) VMID 686 (1 hr) VTPP 625 (3 hrs) Summer: VIBS 684 or Research (6 hrs)
No later than April 15	Submit Externship report form (page 1)	Weihsueh Chiu	Obtain form from Kim Daniel
No later than June 1	 Submit Research Rotation form (#2) Select mentor and laboratory Establish graduate advisory committee Submit TOXI Graduate Student Record form Submit annual TOXI Graduate Student Evaluation and Progress Report form 	Kim Daniel Rotation advisor Graduate advisor and advisory committee members	Obtain forms from Kim Daniel
June-August	Complete externship	Weihsueh Chiu	

Regulatory Science in Environmental Health and Toxicology Training Program: Year 2 Training Timeline for Doctoral Students

Timeline	Activities	Who to contact with questions	Notes
August- September	 Attend and present poster at IFT annual retreat/forum Submit electronic degree plan 	Kim Daniel Graduate advisor and advisory committee members	Degree plan at: ogsdpss.tamu.edu/ Grad School forms and other docs at: grad.tamu.edu/
No later than September 15	Submit Externship report form (page 2)	Weihsueh Chiu	Obtain forms from Kim Daniel
September- December	 Conduct dissertation research Take remaining core courses plus elective courses (9 hours total, can include research) Register for and attend IFT seminars and Tox Journal Club Register for Spring classes (Nov; 9 hours) 	Graduate advisor Kim Daniel	<u>Core Courses</u> : VIBS 602 (4 hrs) VTPP 681 (1 hr) PHEO 681 (1 hr) Electives / Research
January-May	 Conduct dissertation research Take elective courses/research 2nd year committee meeting (review courses, discuss schedule for preliminary written examination and defense of dissertation proposal) Attend IFT seminars and Tox Journal Club Register for Summer and Fall (April; research hours, 6 for Summer, 9 for Fall) 	Graduate advisor and advisory committee members Kim Daniel	
No later than June 1	 Submit TOXI Graduate Student Record form & CV Submit annual TOXI Graduate Student Evaluation and Progress Report form and supporting documents 	Graduate advisor and advisory committee members Kim Daniel	
June-August (or Spring semester, as determined by the advisor and advisory committee)	 Preliminary written examination (submit preliminary exam checklist and report to Grad School and assessment rubric to IFT) Oral Preliminary Exam (also called Defense of the dissertation proposal); submit dissertation proposal and approval form to Grad School) Dissertation/Research Proposal should be prepared and submitted near the time of the preliminary exams (requires approval of committee and IFT Chair, approved by the Grad School) 	Kim Daniel Graduate advisor and advisory committee members	Preliminary exams MUST occur within a 3-week period and should be scheduled in the semester after coursework is completed or earlier if ≤6 hrs of coursework remains

Regulatory Science in Environmental Health and Toxicology Training Program: Year 3+ Training Timeline for Doctoral Students

Timeline	Activities	Who to contact with questions	Notes
September	 Attend IFT Annual retreat/symposium and present poster of your research/data 	Kim Daniel	
September- December	 Conduct dissertation research Attend IFT seminars (schedule to present once a year) and Tox Journal Club Register for Spring (Nov; 9 hours research) 	Graduate advisor Kim Daniel	
January-May	 Conduct dissertation research Annual committee meeting (review progress towards graduation and other activities) Attend IFT seminars and Journal Club Register for Summer and Fall (April; 6 hours research-Summer, 9 hours research-Fall) 	Graduate advisor and advisory committee members Kim Daniel	
No later than June 1	 Submit TOXI Graduate Student Record form & CV Submit annual TOXI Graduate Student Evaluation and Progress Report form and supporting documents 	Graduate advisor and advisory committee members Kim Daniel	

Graduation Documents and Procedures for Doctoral Students

(many forms and the official graduate calendars are available on the Graduate & Professional School website, grad.tamu.edu)

Requirement	Deadlines	Approval	Notes
Complete residence requirement	 Before submitting request to schedule final examinations 	The Grad School	Doctoral students must spend at least two full years in resident study
Apply for degree & pay graduation fee	 During first week of final semester. See Grad School calendar for deadlines 	The Grad School	Howdy portal
Final Examination / Dissertation Defense	 See Grad School calendar for exact deadlines <u>Tentative deadlines:</u> Fall: early October Spring: early March Summer: early June 	Advisory Committee Chair; IFT Chair; The Grad School	 Request for exam form must be received by Grad School 10+ working days before exam date – work with Kim Daniel to prepare and submit this form Report of final exam form sent by Grad School to mentor and Kim (not student) Assessment rubric form from IFT
Submit dissertation or record of study	One week past defense deadline; see Grad School calendar for exact deadlines	Advisory Committee Chair; IFT Chair; The Grad School	 Approval of written thesis form; Copyright and Availability form
Graduation	 Ceremony dates on: graduation.tamu.edu/ 	The Grad School	Arrange for cap/gown thru TAMU Bookstore Must register continuously until all degree requirements have been met You will graduate with the College in which your mentor is a faculty member

SECTION C - MASTER OF SCIENCE DEGREE

Students in the Master of Science program are strongly advised to familiarize themselves with the University requirements for Master of Science degrees, which are extensive, and to consult with their advisors. A few guidelines in general for the Master's degree requirements are provided in the following sections, however Master's students may also refer to Section B for details as many requirements are the same for MS and PhD students. All degree requirements must be completed within seven consecutive years for the MS degree to be granted.

THESIS OPTION:

- A minimum of 32-semester credit hours of approved courses, including all required core courses, and research hours;
- A degree plan approved by a thesis advisory committee (Master's committees require <u>three</u> faculty members, one of which must be outside of the student's department) and the Grad School. *Note that the deadline for submitting a degree plan is usually in the middle of the <u>second full semester of study</u>;*
- Submission of a thesis *proposal* approved by the advisory committee and the IFT Chair (this does not require a committee meeting, but a meeting may be useful to discuss the proposal);
- An oral defense of a Master's thesis, which must be approved by the advisory committee.

Rules and procedures for submission of the completed thesis, with the appropriate approvals, can be found at <u>http://thesis.tamu.edu/</u>.

Seminars, Scientific meetings and Student Travel Rules

Refer to the corresponding policies in Section B.

MS Thesis Proposal and Defense of the Thesis

Refer to PhD Proposal and Defense in Section B. *The MS student submits a thesis proposal and defends a thesis rather than dissertation.*

NON-THESIS OPTION

Please consult with the IFT Chair and Program Coordinator for details. This degree is only offered under special circumstances.

Toxicology Training Program Year 1 Training Timeline for Masters Students

Timeline	Activities	Who to contact with questions	Notes
May-August	 Select mentor and laboratory Register for Fall semester classes Register for TAMU Grad School and college-level Graduate Student Orientations 	Kim Daniel Ivan Rusyn	 Register at <u>howdy.tamu.edu/</u> Grad School orientation registration at: <u>grad.tamu.edu/</u>
Mid-August	 Attend Grad School's student orientation and college-level orientations 	Kim Daniel	
August- September	 Attend IFT Annual retreat/forum Meet with Dr. Chiu to discuss externship opportunities & application (optional) 	Kim Daniel Weihsueh Chiu	
September- December	 Take core courses Attend IFT seminars (Mon @3:30 PM) Attend Tox Journal Club (Fri @ 9:20 AM) Register for Spring classes (November) Conduct thesis research 	Kim Daniel	Fall Core Courses: VTPP 673 (3 hrs) PHEO 605 (3 hrs) VIBS 641 (3 hrs) BIOL 683 (3 hrs)
January-May	 Take core courses 1st year committee meeting (review courses, rotations, extern plans) Attend IFT seminars & TOX Journal Club Apply for externships <i>(optional)</i> Register in April for Summer hours (externship optional); and Fall hours (9 hours; remaining core courses plus electives/research based on trainee's preference and selected in consultation with advisor and advisory committee members) Conduct thesis research 	Kim Daniel Weihsueh Chiu	<u>Spring Core Courses</u> : VIBS 670 (3 hrs) VIBS 645 (2 hrs) VMID 686 (1 hr) VTPP 625 (3 hrs) <u>Summer</u> : VIBS 684 or Research (6 hrs)
By March 1	 Establish graduate advisory committee Submit degree plan to The Grad School 	Graduate advisor and advisory committee members	Degree plan at: ogsdpss.tamu.edu/ (consult with Kim Daniel before submission)
By April 15	 Submit Externship report form (page 1; externship optional) 	Weihsueh Chiu	Obtain forms from Kim Daniel
By June 1	 Submit annual TOXI Graduate Student Evaluation, CV, Student Record Form and Progress Report form 	Graduate advisor and advisory committee members Kim Daniel	Obtain committee meeting forms from Kim Daniel
May-July	 Complete externship (optional) Prepare and submit thesis research proposal and approval form 	Graduate advisor and advisory committee members	Graduate forms and other documents at: grad.tamu.edu/

Toxicology Training Program Year 2 Training Timeline for Masters Students

Timeline	Activities	Who to contact with questions	Notes
August- September	Attend IFT Annual retreat	Kim Daniel	
September- December	 Conduct thesis research Take remaining core courses and elective courses Attend IFT seminars (Mon @3:30 PM) Register for Spring classes 	Graduate advisor Kim Daniel	VIBS 602 (3 hrs) VTPP 681 (1 hr) PHEO 681 (1 hr)
By Sept. 15	 Submit externship report form (page 2; if applicable) 	Weihsueh Chiu	
January	 Complete residence requirement before scheduling final exam/thesis defense Apply for degree and pay graduation fee - 1st week of final semester 	The Grad School	<u>http://grad.tamu.</u> <u>edu/Buttons /Calendars</u> Howdy portal
January-May	 Conduct thesis research Take elective courses Attend IFT seminars (Mon @3:30 PM) Register for Summer/Fall (April, if not graduating in May) 2nd year committee meeting (review courses, discuss thesis defense/graduation) Submit annual TOXI Graduate Student Evaluation, Student Record & Progress Report forms 	Graduate advisor and advisory committee members Kim Daniel	Take VMID 686 (1 hr) if not taken in 1st year Obtain forms from Kim Daniel
February	• Request for final exam form must be received by Grad School ≥ 10 working days before exam	Advisory Committee Chair; IFT Chair; The Grad School	See graduate calendar for exact deadlines <u>Tentative defense</u> <u>deadlines:</u> Fall: mid-October Spring: early March Summer: mid-June
March	 Final Examination / Thesis Defense (by early March) Report of final exam form (Grad Sch.) Assessment rubric form (IFT) Submit thesis or record of study, signed Thesis Approval form and Copyright and Availability form to Thesis Office 		Thesis deadline one week past defense deadline; see graduate calendar for exact deadlines
Мау	 Graduation (Ceremony dates/times on: <u>graduation.tamu.edu/</u>) 	The Grad School	Arrange for cap and gown through TAMU Bookstore Must register continuously until all degree requirements have been met

SECTION D - UNIVERSITY & IFT POLICIES

The Texas A&M University System and the IFT have a strong commitment to equal employment opportunity, without regard to race, color, sex, religion, age or disability status.

Expectations for Graduate Study at Texas A&M University

The major goals of graduate education at Texas A&M University are to instill in each student an understanding of and a capacity for scholarship, independent judgment, academic rigor, and intellectual honesty. Faculty and graduate students have a shared obligation to work together to foster these goals through relationships that advance freedom of inquiry, demonstrate individual and professional integrity, and encourage common respect. Graduate student progress is guided and evaluated by an advisor and a graduate committee. These individuals direct and support the appropriate developmental and learning goals of graduate students. The advisor and the graduate committee also have the obligation of evaluating a graduate student's academic performance. The graduate student, the advisor, and the graduate committee constitute the basic core of graduate education. It is the quality, scope, and extent of interaction in this group that determine the significance of the graduate experience.

High quality graduate education requires professional and ethical conduct of the participants. Faculty and graduate students have mutual responsibilities in ensuring academic standards and quality graduate programs. Excellence in graduate education is achieved when faculty and students are inspired, have the academic and professional backgrounds essential to function at the highest level, and are genuine in their mutual desire to see one another triumph. Any action that negatively affects this interaction, from either faculty member or student, destroys the relationship. Mutual respect is critical to the successful process. With these goals in mind, these imperatives are put forth.

Expectations for Graduate Students

- Exercise the utmost integrity in all facets of the graduate program.
- Behave in a professional and mature nature in all interactions with faculty, staff, and fellow students, both graduate and undergraduate.
- Accept the chief responsibility to be knowledgeable of the rules and regulations governing graduate education, including those promulgated by Texas A&M University, the respective college, and the degree program (<u>http://student-rules.tamu.edu</u>)
- Enroll in the appropriate course work to complete the degree plan.
- Maintain the appropriate standards to continue graduate studies.
- Understand that the faculty advisor and the committee members sustain the intellectual and instructional surroundings in which the student develops competencies.
- Understand that faculty members have the right to allocate their own professional time and other resources in diverse forms that are academically effective.
- Understand that the faculty advisor and the committee members are accountable for monitoring the accuracy, validity, and integrity of all facets of the student's program. A well-conceived program reflects positively on the student, the faculty advisor, the advisory committee, and the University.
- Acknowledge, as appropriate, the contributions of the faculty advisor and others in publications and presentations.
- Maintain appropriate confidentiality concerning the creative activities and research of faculty, staff and

fellow students prior to presentation or publication, in accordance with existing practices and policies of the discipline and of Texas A&M University.

• Submit documents (proposal, thesis, dissertation, etc.) that are the original work of the student. Plagiarism will not be tolerated.

Expectations for Faculty

- Exercise the utmost integrity in all facets of the graduate program.
- Provide intellectual and technical encouragement, moral support, and direction in support of a graduate student's progress toward degree completion.
- Establish a professional working environment that nurtures and encourages students to learn imaginatively both as an individual and as a team member.
- Develop a crystal-clear understanding with graduate students regarding their specific professional responsibilities, including time lines for completion of scholarly work, as well as the thesis or dissertation.
- Provide timely verbal or written assessment of each student's work.
- Initiate discussion of authorship procedure with each graduate student prior to initiating collaborative projects that may result in publication.
- Refrain from asking any student to undertake personal tasks (mowing lawns, baby-sitting, typing papers, etc.) without suitable payment or when conditions are such that the student would not feel free to decline the offer. Faculty must understand that the graduate student is free to decline such invitations. Such employment should not be established when the professional relationship would be harmed by the arrangement.
- Relate mutually with graduate students in a professional and civil fashion and in conformity with Texas A&M University policies governing nondiscrimination and sexual harassment.
- Justly assess student achievement regardless of religion, race, gender, sexual orientation, nationality, or other criteria that are not germane to academic performance.
- Serve on graduate student committees without regard to the student's religion, race, gender, sexual orientation, nationality, or other characteristics that are not germane to academic performance.
- Prevent any professional or personal differences with colleagues from hindering his/her obligations as a graduate advisor, committee member, or instructor.
- Decline service on graduate committees when there is an amorous, familiar, or other non-academic relationship between faculty member and the student that may result in a conflict of interest.
- Give appropriate credit to graduate student contributions to scholarly activity presented at professional meetings, in professional publications, or in applications for copyrights, patents, and grants.
- Accept the responsibility to know the rules and regulations that affect graduate students.

Academic Status

The University mandates that all full-time graduate students supported by an assistantship or fellowship must register for 9 credit hours each fall and spring semester, plus 6 credit hours in summer, and maintain a grade point average of 3.0 or above. A graduate assistantship may be terminated for failure to register for the required minimum number of credit hours, or if for any reason credit hours fall below the minimum during the semester. Additionally, a student's registration will be blocked for non-compliance with the continuous registration

requirements. Lifting a registration block or hold requires both 1) a favorable recommendation from the student's advisor (major professor), and 2) approval from the Graduate and Professional School.

International students may have additional requirements depending on their visa status. To obtain current information on visa requirements, international students should consult an international student advisor at the Office of International Student Services (ISS), at 979-845-1824, 110 Pavilion Building.

Registration

Registration for courses and optional fees is done via the My Records tab of the <u>Howdy portal</u>. First semester students must discuss planned courses with the Toxicology Graduate Advisor prior to registration. The schedule of classes offers guidance through the process.

Tuition & Fees

Teaching assistants (GAT), research assistants (GAR), and non-teaching graduate assistants (GANT) who are employed at least one-half time at a Texas institution of higher education, and whose job duties are related to teaching or research in an academic program associated with their field of study, are entitled to receive Texas-resident rate tuition and fees, and payment of tuition and required fees on their behalf. Payment is due prior to the first day of class, usually by 5:00 PM the Friday prior to classes). Failure to pay will result in courses being dropped and a reinstatement fee of at least \$100. For dates and details concerning payment of tuition and fees, refer to the Howdy Portal > My Record tab > Schedule of Classes or visit the <u>academic calendar</u>.

One of the required fees is for computer use, and entitles students to use numerous computer facilities around campus with access to e-mail and Internet accounts, computers, and printers. Orientation classes are available at no cost, and help centers are distributed around campus.

The Student Recreation Center fee is also required and entitles students to use the <u>Rec Center</u>. It houses indoor and outdoor swimming pools, indoor and outdoor basketball courts, weight training and cardiovascular equipment, aerobics, racquetball courts, a climbing wall, a 1/4-mile indoor track, outdoor volleyball pits, Jacuzzis, lockers and showers and a snack bar. (979) 845-7826).

Needs-Based Tuition and Fees Funding Requests for MS or PhD trainees

In exceptional circumstances, the need for additional support outside of the trainee's laboratory may arise. Short-term needs-based funding related to tuition and fees will be considered on a case-by-case basis by the IFT leadership.

In order to make a request for financial hardship-related support from the Program, the trainee should submit a memo to the Chair of IFT including, but not limited to the following:

- 1) what is requested and for what time period
- 2) justification of the need, including a list of past funding sources and any self-funding
- 3) current CV
- 4) letter of justification from the primary mentor

There is no formal deadline for these requests, but requests will be reviewed by the IFT Executive Committee twice per year (fall and spring semesters) and decisions will depend on the availability of funds and other programmatic factors. If a situation requires expedited review, it will be conducted via email or by calling a special meeting of the IFT Executive Committee.

Stipends and Funding

The IFT Program and the Admissions Committee are committed to securing stipends for students prior to admission; however, stipends for incoming students are not guaranteed and we discourage admitted applicants from making commitments to attend the program until the status of their funding has been resolved to the applicant's satisfaction. The stipends may be in the form of either fellowships or assistantships, depending on the source of funds. It is assumed that all students in the program will become either Graduate Research or Graduate Teaching Assistants (GAR or GAT) except for the period of time in which they may receive a fellowship and are considered Graduate Students.

Funding for current students in the program is also not guaranteed and each trainee is encouraged to have regular discussions with her/his mentor and/or IFT Program leadership regarding the availability of funding. Specific terms of stipends are presented to incoming students in their offer letters, or are determined between the student and their mentor.

Right to Review Records

Students, once enrolled, have the right to review their educational records, except for those excluded by law, such as parents' financial statement or records maintained by a physician or psychiatrist. Educational records are maintained in departmental offices, the office of Student Records and of Student Financial Aid, the offices of various College Deans, the office of Career Development and Placement, and in the office of Educational Advising.

Academic Dishonesty

Academic dishonesty is a serious offense that cannot be tolerated in an academic community. Dishonesty in any form, including cheating, plagiarism, deception of effort, or unauthorized assistance, may result in a failing grade in a course and/or dismissal from the Graduate Program and University. Falsification of data can be grounds for immediate dismissal. For details, visit the <u>Office of the Aggie Honor System</u>.

Ownership of Data

When a student enters a laboratory to work on a project, it is understood that any data produced remains the property of the University through the individual faculty member. NIH guidelines require that data and notebooks remain with the Principal Investigator and with the University. Final decisions on publication and on co-authorship of papers rest with the Principal Investigator (faculty advisor).

SECTION E - RESOURCES & REFERENCES

Research Facilities

The departments housing the Interdisciplinary Faculty of Toxicology have modern research facilities which are equipped with a full range of instrumentation required for research in Mechanistic Toxicology, Data Science and Modeling, Epidemiology, Community Engagement, Environmental Chemistry, Biomedical Engineering and Public Policy. Facilities for recombinant DNA research, cell culture, electron microscopy, flow cytometry, histology, image analysis/cytogenetics, laboratory/transgenic animal research and containment, peptide sequencing, genomics/proteomics, veterinary medicine diagnostics, and mass spectrometry are also available.

Graduate and Professional School (Grad School) (979) 845-3631.

The Grad School is located in Nagle Hall, and is responsible for overseeing all graduate students at Texas A&M. Their website has many official forms, guidelines and resources with which all graduate students should become familiar. Through the course of a graduate career, there are several steps where Grad School approval is required:

- Submission of Degree Plan
- Submission of checklist and signature sheet for Preliminary Examinations
- Submission of Proposal
- Submission of Petitions for changes to committee, degree plan, major, etc.
- Scheduling of Final Exam/Defense
- Graduation Clearance

International Student Services (ISS) (979) 845-1824.

International Student Services office is located in the Pavilion and aids international students. All international students are required to "check in" with ISS upon arrival to TAMU to ensure that their visa and other official requirements for immigration and employment are complete. ISS also assists students throughout their graduate careers with visa changes, extensions and compliance, financial problems, medical insurance, and tax issues.

Student Organizations

Numerous organizations exist on campus specifically for graduate students. At the University level, the **Graduate and Professional Student Council (GSC)** serves as the student government for Texas A&M University's graduate and professional students. Their purpose to improve graduate students' academic, living and social experiences. The GSC represents student's concerns and is their liaison with the University Administration. General Assembly Meetings take place every 1st and 3rd Tuesday at 5:15 p.m. in Room 144 Koldus. Assembly meetings are open to all graduate students. Within the College of Veterinary Medicine & Biomedical Sciences, the **CVM Graduate Student Association (GSA)** provides similar representation at the College level. Many other similar organizations are available in the various colleges and departments.

Scholarships & Financial Aid (979) 845-3236.

The Department of Student Financial Aid is located on the second floor of the Pavilion and offers both emergency loans for tuition and fees and short-term loans for expenses other than tuition and fees. Emergency loan applications must be completed online via a valid Texas A&M email account. Scholarships and grants are sometimes available to students meeting the specified criteria for the award. The Financial Aid website contains a great deal of helpful information.

Student Health Insurance and Student Health Services (A.P. Beutel Health Center)

Appointments (979) 845-6111; Dial-A-Nurse (979) 845-2822; Information (979) 845-1511

Teaching and research assistants are considered half-time TAMU employees and receive graduate student health insurance through TAMU. There is a 60-day qualifying period at the beginning of the employment period in which alternative insurance arrangements must be made. *Note: International students require additional health insurance for evacuation and repatriation.*

Students on fellowships and training grants are **NOT** considered TAMU employees. They must purchase student health insurance. For the most current student health insurance information, refer to <u>http://shs.tamu.edu/insurance.htm</u>. or contact their graduate advisor or departmental HR representative.

Counseling & Psychological Services (CAPS) (979) 845-4427, 24-Hour Helpline 845-2700

Professional counselors at the Student Counseling Service help students with academic or personal problems. They offer confidential services in the areas of personal and career counseling, academic skills enhancement, testing, outreach programming, psychiatric services, consultation and crisis intervention. The office is located in the Student Services Building.

Residence Life (979) 845-4744.

The Department of Residence Life is located in the Student Services Building. The University has a limited number of on-campus apartments for married/graduate students at reasonable rental rates. Applications and additional information are available at the Residence Life website.

Career Center (979) 845-5139.

The Career Center is located in Room 209 Koldus. They offer Graduate Career Education services including workshops on resume, CV and cover letter writing, job search strategies, job searches in and outside of academia or for international students, interviewing skills and salary negotiation strategies. A mentoring service is also available for graduate students.

Academy for Future Faculty (979) 845-8392.

The Academy for Future Faculty (AFF) is a CIRTL@TAMU program. The Center for the Integration of Research, Teaching, and Learning (CIRTL) is a National Science Foundation (NSF) Center for Learning and Teaching in higher education. AFF provides professional development for graduate students and post-docs in preparation for a career in higher education. AFF offers a two-semester program anchored by faculty mentorship and featuring weekly seminars and workshops. AFF events are free and open to everyone in the Texas A&M University academic community. Participants may choose to attend a few events or enough to complete requirements for the Academy for Future Faculty Fellow certificate. New fellows are recognized at our annual banquet in April.

Campus Buildings (All TAMU buildings and athletic stadiums are non-smoking facilities).

- <u>The Pavilion (PAV)</u>: This Pavilion is home to the Scholarships and Financial Aid Office and International Student Services. All money exchanges, loans, and other financial assistance can be handled in the Pavilion.
- <u>Beutel Health Center (BEUT)</u>: The health center is located across from All Faiths Chapel on the north side of campus. Beutel provides free healthcare services to all enrolled students.
- <u>Memorial Student Center (MSC)</u>: This building is dedicated to "all Aggies who have died defending their country in wars, past and future." The University asks that hats be removed before entering the building

and that no one walks on the grass surrounding the MSC. The MSC contains the only bookstore in town that sells books for graduate classes. The MSC also contains a store that sells Aggie souvenirs and school supplies, two art galleries, a cafeteria, a snack bar, meeting rooms, and activity spaces.

- <u>General Services Complex (GSC)</u>: This building is located at the north end of Agronomy Road, and contains many student services including the Offices of the Registrar, Admissions and Records, and Student Business Services. Student ID services, student account and billing services are handled in the GSC. This building also contains all employee services such as payroll and human resources.
- <u>Student Computing Centers (SCC)</u>: There are twelve computing centers located around campus. The main computing center is the SCC, located on main campus next to Evans Library. The SCC provides students with access to over 500 computers equipped with internet access and printing services. Other computer labs can be found in the West Campus Library, Blocker Building, Horticulture and Forest Science Building, Read Building, Wisenbaker Engineering Research Center, Bright Athletics Lab, Corps Lounge, the Memorial Student Center, and the General Services Complex.
- <u>Libraries</u>: The University is home to five campus libraries. The largest library is Evans Library (LIBR), located in the center of main campus and also houses both the Cushing Library and Digital Library. This library has a large reference section, several databases available to search, microfilm, microfiche, a government document section, a large science fiction collection, a snack bar, and study carrels. Graduate students may check out books for four weeks at a time. The Medical Sciences Library (MEDL) is located on West Campus. It has most of the scientific journals that the main library has, and has group study rooms which can be reserved. Other libraries on campus include the West Campus Library (WCLF), and the Policy Sciences and Economics Library which is located on the first floor of the Annenberg Presidential Conference Center. Students have access to thousands of reference books, journals and articles.
- <u>Student Recreational Center (SREC)</u>: The recreational center is located on West Campus, across from Reed Arena. With a student ID, students may use the facilities at no additional charge. The Rec Center facilities include indoor and outdoor pools, a rock-climbing wall, exercise machines, an indoor track, basketball courts, volleyball courts, personal trainers, fitness classes and much more.
- <u>Graduate and Professional School (Grad School)</u>: The Graduate and Professional School is located in Nagle Hall and provides all graduate student services.
- <u>Thesis Office</u>: The Thesis Office is located on the 6th floor of Evans Library and is responsible for ensuring that each thesis or dissertation follows the University formatting standards. They offer workshops and provide advice during the writing process, and they publish the Thesis Manual which includes the format rules. They also offer a pre-submittal review, and review submitted theses and dissertations for final copy.

REFERENCES

Graduate Catalog: https://catalog.tamu.edu/graduate/

Graduate Resources: https://grad.tamu.edu/Buttons/Resources-for-Degree-Completion

Tips for Living Off Campus in Aggieland: <u>https://newaggie.tamu.edu/tips-for-living-off-campus/</u>

Student Rules: http://student-rules.tamu.edu/

Resident Faculty Research Interests & Contact Information

- **E. Murl Bailey**, Professor, Vet. Physiology & Pharmacology, (979) 845-5976, <u>m-bailey@tamu.edu</u> Research Interests: plant and natural products toxicology, veterinary toxicology
- Sakhila K. Banu, Associate Professor, Vet. Integrated Biosciences, (979) 458-3613, <u>skbanu@cvm.tamu.edu</u> Research Interests: heavy metal toxicity on the development of ovary, pituitary and thyroid, and female reproduction, prostaglandin biosynthesis, signaling and transport on cancer
- A. Catherine Barr, Lead Scientist Toxicology, Texas Veterinary Medical Diagnostic Lab, <u>acbarr@tvmdl.tamu.edu</u> Professional Interests: clinical and diagnostic toxicology, toxic plants, veterinary public health
- Robert C. Burghardt, Professor & Associate Dean for Research & Graduate Studies, CVM (979) 845-5092, <u>rburghardt@cvm.tamu.edu</u> Research Interests: toxicity mechanisms using vital fluorescence imaging; intercellular communication in normal and transformed cells
- **Raymond J. Carroll**, Distinguished Professor, Statistics, (979) 845-3141, <u>carroll@stat.tamu.edu</u> Research Interests: statistical methods to predict health outcomes from noisy or incomplete risk factor information, risk assessment
- Sanjukta Chakraborty, Assistant Professor, Medical Physiology, (979)436-0829, science Research Interests: inflammation as a prime modulator of lymphatic associated pathologies, the role of an inflammatory tumor-lymphatic microenvironment in cancer progression, and the role of microbiota dysbiosis in lymphatic inflammation and effect on associated pathologies
- **Robert S. Chapkin**, Distinguished Professor, Nutrition and Food Science, (979) 845-0419, <u>r-chapkin@tamu.edu</u> Research Interests: impact of diet on intracellular signaling pathways and gene expression
- Weihsueh A. Chiu, Professor, Vet. Integrated Biosciences, (979) 845-4106, <u>wchiu@cvm.tamu.edu</u> Research Interests: quantitative approaches that integrate laboratory research findings so as to directly inform decision-making related to chemicals in the environment (toxicokinetics, mechanisms of toxicity, dose-response assessment, and characterization of uncertainty and variability)
- Kung-Hui "Bella" Chu, Professor, Civil Engineering, (979)845-1403, <u>khchu@tamu.edu</u> Research Interests: biodegradation and treatment of endocrine-disrupting chemicals, pharmaceuticals, personal care products and common pollutants
- Leslie H. Cizmas, Instructional Asst. Professor, Environmental & Occupational Health, (979) 845-5647, <u>lcizmas@tamu.edu</u> Research Interests: occupational and environmental health and toxicology, risk assessment
- Tracy Clement, Assistant Professor, Vet. Physiology & Pharmacology, (979)845-7261, <u>tclement@cvm.tamu.edu</u> Research Interests: genetics, epigenetics, molecular and cellular biology of male fertility; cyto/nucleoskeletal morphogenesis in the developing spermatid, contribution of these mechanisms to epigenetic preconception exposure of the male germ-line affecting offspring health and disease
- Michael F. Criscitiello, Professor and Assoc. Dean for Research and Grad Studies, Vet. Pathobiology, (979) 845-4207, <u>mcriscitiello@cvm.tamu.edu</u> Research Interests: immunology and immunotoxicology
- **Chendil Damodaran,** Interim Assoc. Dean of Research & Innovation, College of Pharmacy, (979)436-0495, <u>chendamodar@tamu.edu</u> Research Interests: Etiology of genitourological cancers, developing novel biomarkers for prostate cancer, chemoprevention and treatment of prostate, breast, colon and bladder cancer
- **Alva Ferdinand**, Assistant Professor, Health Policy and Management, (979)436-9434, <u>aferdinand@tamu.edu</u> Research Interests: effectiveness of laws aimed at improving public health, state and federal regulation of health care delivery, health law and ethics, research integrity, and disparities in health outcomes
- **Rebecca Fischer**, Asst. Professor, Epidemiology and Biostatistics, (979)436-9393, <u>rfischer@tamu.edu</u> Research Interests: zoonotic, vector-borne, parasitic, and other tropical diseases, epidemiology of infectious

diseases, field epidemiology and rapid epidemiologic assessment and response, outbreak epidemiology and global health

- **Robin Fuchs-Young**, Professor, Molecular & Cellular Medicine, (979) 845-5109, <u>fuchs-young@tamu.edu</u> Research Interests: basic mechanisms of breast cancer carcinogenesis, and the impact of exposure to metabolic syndrome during different stages of development
- Michael C. Golding, Associate Professor, Vet. Physiology & Pharmacology, (979) 862-1332, <u>mgolding@cvm.tamu.edu</u> Research Interests: epigenetic defects arising as a consequence of prenatal alcohol exposure
- Arum Han, Professor, Electrical Engineering, (979)845-9686, <u>arum.han@tamu.edu</u> Research Interests: micro/nano systems technology in the use of grand challenge problems including microphysiological systems (organ-on-a-chip), metastatic cancer analysis, microbes as biorefinery, and microbial physiology and functions in infectious disease
- **Roger B. Harvey,** USDA ARS; Adjunct Prof., Vet. Integrative Biosciences, (979) 260-9259, <u>harvey@ffsru.tamu.edu</u> Research Interests: toxic effects of mycotoxins to food animals and techniques to prevent or ameliorate toxicity
- Timothy J. Herrman, Professor and State Chemist, Office of State of Texas Chemist, (979)5-1121, <u>therrman@tamu.edu</u> Research Interests: grain crops, feed and fertilizers, and regulatory science
- Arul Jayaraman, Professor & Head, Chemical Engineering, (979)845-3306, <u>arulj@tamu.edu</u> Research Interests: systems analysis of cytokine signaling in hepatic inflammation, metabolic engineering of adipocytes, living cell arrays for dynamic gene expression profiling, and quorum sensing in bacterial communication and biofilm formation
- Larry Johnson, Professor, Vet. Integrative Biosciences, (979) 845-9279, <u>ljohnson@cvm.tamu.edu</u> Research Interests: effect of dioxin and dinitrobenzene on spermatogenesis; effect of age on germ cell degeneration and spermatogenesis
- Natalie M. Johnson, Assoc. Professor, Environ. & Occupational Health, IFT Vice Chair, (979) 436-9510, <u>nmjohnson@tamu.edu</u> Research Interests: maternal air pollution exposure, inhalation & developmental toxicology, neonatal respiratory tract infections, childhood asthma, and development of biomarkers of exposure to traffic-related air pollution
- Anthony H. Knap, Professor & Director, Geochemical & Environmental Research Group, (979) 458-9328, <u>tknap@tamu.edu</u> Research interests: oceanography, organic geochemistry, environmental science, atmosphere/ocean interactions, oil pollution and dispersants, effects of chemicals on marine environment, and ocean and human health interactions
- **Gladys Y.L. Ko**, Associate Professor, Vet. Integrative Biosciences, (979) 845-1797, <u>gko@cvm.tamu.edu</u> Research Interests: circadian neurobiology, synaptic plasticity and regulation of voltage-dependent calcium channels
- **Thomas J. McDonald**, Professor, Environmental & Occupational Health, (979) 458-4267, <u>tmcdonald@srph.tamhsc.edu</u> Research Interests: occupational and environmental health and toxicology, risk assessment
- **Rajesh C. Miranda**, Professor, Neuroscience & Exp. Therapeutics, (979) 862-3418, <u>miranda@medicine.tamhsc.edu</u> Research Interests: mechanisms of estrogen action in the developing cerebral cortex
- Miguel A. Mora-Zacarias, Professor & Associate Head, Wildlife and Fishery Science, (979) 845-5775, <u>mmora@tamu.edu</u> Research Interests: wildlife toxicology and avian ecology
- Newell-Fugate, Anne, Asst. Professor, Veterinary Physiology & Pharmacology, (979)845-1744, <u>anewell-fugate@cvm.tamu.edu</u> Research Interests: effects of obesity, hyperinsulinemia, and insulin resistance on androgen steroidogenesis and the interrelationship between androgens and insulin signaling in steroidogenic tissues and adipose tissue
- Peng, Xu, Assoc. Professor, Medical Physiology, (979)436-9265, <u>xp23@tamu.edu</u> Research Interests: explore and define novel genetic mechanisms that are involved in cardiovascular disease which can ultimately translate into potential strategies for its treatment

Timothy D. Phillips, Distinguished Professor, Vet. Integrative Biosciences, (979) 845-6414, tphillips@cvm.tamu.edu

Research Interests: cellular mechanisms of toxins, chemical methods to detect and detoxify toxin-contaminated sources

Suresh D. Pillai, Professor, Food Science and Technology, (979) 458-3229, <u>s-pillai@tamu.edu</u> Research Interests: occurrence, fate, transport, activity and public health risks of microbial pathogens in natural and man-made ecosystems such as ground and surface water, wastewater, bioaerosols and food-processing

- **Efstratios Pistikopoulos**, Professor, Chemical Engineering and Texas A&M Energy Institute, (979)458-0259, <u>stratos@tamu.edu</u> Research Interests: development of fundamental theory and optimization-based methodologies and computational tools for process manufacturing systems which are economical, energy efficient and environmentally benign with good performance characteristics
- Weston W. Porter, Professor, Vet. Integrative Biosciences, (979) 845-0733, <u>wporter@cvm.tamu.edu</u> Research Interests: endocrine disruptors relating to breast and ovarian cancers
- Taehyun Roh, Asst. Professor, Epidemiology and Biostatistics, (979)436-9453, <u>taehyunroh@tamu.edu</u> Research Interests: arsenic and water pollution of water supplies, clean water access in rural populations, toxicology and environmental health
- Ivan I. Rusyn, IFT Chair; Professor, Vet. Integrative Biosciences, (979) 458-9866, <u>irusyn@cvm.tamu.edu</u> Research Interests: environmental genomics, mechanisms of action of environmental toxicants and the genetic determinants of the susceptibility to toxicant-induced injury
- **Stephen H. Safe**, Distinguished Professor, Vet Physiology & Pharmacology, (979) 845-5988, <u>ssafe@cvm.tamu.edu</u> Research Interests: toxicology and molecular biology of estrogenic and antiestrogenic compounds; molecular mechanisms of estrogen receptor and Ah receptor action and their crosstalk in breast cancer cells, PPARγ agonists and inhibition of cancer cell growth
- Virender K. Sharma, Professor, Environmental & Occupational Health, (979) 862-6672, <u>vsharma@sph.tamhsc.edu</u> Research Interests: chemistry and applications of ferrates VI, V and IV; formation, fate and toxicity of silver and gold engineered and natural nanoparticles in the aquatic environment; and applications of ferrites to destroy toxins and pollutants under solar light
- Alexei V. Sokolov, Professor, Physics and Astronomy, (979) 845-7733, <u>sokol@tamu.edu</u> Research Interests: generation of sub-femtosecond and sub-cycle optical pulses with controlled temporal shapes, and their application for ultrafast studies
- Susanne M. Talcott, Associate Professor, Nutrition and Food Science, (979) 862-7095, <u>smtalcott@tamu.edu</u> Research Interests: pharmacometrics, bioavailability, metabolisms and efficacy of botanical compounds; botanical compounddrug interactions; apoptotic and antioxidant effects
- **David W. Threadgill,** Distinguished Professor, Molecular & Cellular Medicine, (979) 862-2569, <u>dwthreadgill@tamu.edu</u> Research interests: susceptibility to environmental exposures with a focus on how genetics of exposed individuals impacts response. The areas of specific emphasis are cardiotoxicity, developmental toxicity, and carcinogenesis.
- Yanan Tian, Associate Professor, Vet. Physiology & Pharmacology, (979) 458-3599, <u>ytian@cvm.tamu.edu</u> Research Interests: transcriptional control of the Ah receptor-regulated gene expression; repression of the Ah receptor and NF-KB signal transduction pathways
- InJun Wang, Assoc. Professor, Neuroscience & Experimental Therapeutics, (979) 436-0389, <u>jwang188@tamu.edu</u> Research Interests: slice electrophysiology, dual channel optogenetics and chemogenetics, mouse, rat and viral genetics, neural circuits
- Ursula Winzer-Serhan, Assoc. Professor, Neuroscience & Experimental Therapeutics, (979) 862-2860, <u>uwserhan@medicine.tamhsc.edu</u> Research Interests: nicotine, nicotinic receptors and brain development

APPENDICES

OFFICIAL GRADUATE FORMS GUIDELINES

Official graduate forms are available on the Graduate & Professional School website, <u>http://grad.tamu.edu</u>. Access forms from that site <u>each time</u> they are used to ensure you are using the currently approved form.

The most common forms for graduate students located there are listed below, however there are many more available. Forms requiring committee member approval are routed via DocuSign, and the Grad School no longer accepts paper forms.

- DPSS for Degree Plan and Petition Submission
- Graduation Application and information
- Preliminary Examination Checklist and Report
- Request and Announcement of the Final Examination
- Request for Letter of Completion
- Research Proposal Form
- Thesis and Dissertation Manual

TOXICOLOGY GRADUATE FORMS & RESOURCES

The Toxicology Program has developed forms that are required at various times during a student's graduate career. These should be returned to the Toxicology Program office upon completion.

Required Training for Laboratory Research List

A minimal list of requirements which should be completed prior to working in TAMU laboratories is included (pp. 29-30). Certifications should be sent to the IFT Office who will provide them to faculty research supervisors. Faculty members may require additional training modules or courses.

Laboratory Forms

This form may be used by mentors if desired (not required).

• Guidelines for Toxicology Graduate Studies at TAMU

Annual Graduate Advisory Committee Meeting Forms

These are now available as fillable PDF forms. They are distributed each spring for annual graduate committee meetings, or upon request from the IFT Office).

- Toxicology Annual Graduate Student Evaluation and Progress Report (to be completed by the student and Graduate Advisory Committee)
- TOXI Graduate Student Record PhD or MS (select appropriate form)
- TOXI Annual Evaluation Rubric (to be completed by each committee member)

Rubrics

Rubrics are to be completed by each member of the Graduate Advisory Committee at student milestone events as an important part of our program's Student Learning Assessment:

- TOXI Presentation Rubric (to be used each time the student gives an oral presentation other than Oral Exam, annual committee meeting or defense where other rubrics exist)
- TOXI Oral Exam Rubric (for PhD students only)
- TOXI Final Exam-Defense Rubric (for MS and PhD students)

Required Training for Laboratory Research (in addition to coursework)

Required for All

Human subject	S	
CITI		Biomedical (Biomed) Comprehensive [Human Research
TrainTraq	2112435	HIPAA Privacy and Security for Human Research
Export Controls	5	
TrainTraq	211212	Export Controls & Embargo Training - Basic Course
General lab saf	ety	
TrainTraq	2114106	Introduction to Laboratory Safety Training
TrainTraq	11020/211138	Hazard Communication Training
EHS	211228	Working Safely with Cryogenics https://ehs.tamu.edu/how-do-i/register-for-laboratory-safety-training/
TrainTraq	2112038	DOT Dry Ice Training
Responsible co	nduct of research	
		VMID 686 - Scientific Ethics (TAMU Course, spring semester, 1 credit hour)
CITI	8815	Responsible Conduct of Research CITI - RCR for Biomedical Researchers (Alternate: TrainTraq 211563 Resp. Conduct of Research)
СІТІ	71732	CITI Conflicts of Interest - Conflicts of Interest https://about.citiprogram.org/en/course/conflicts-of-interest-coi-basic/
Rigor and repro	oducibility in biom	nedical research
NIGMS	Short course	NIH Rigor & Reproducibility Training Modules
	(one)	https://www.nigms.nih.gov/training/pages/clearinghouse-for-training-modules-to-enhance-data-
		reproducibility.aspx OR: "Improving Reproducibility in Research" (Aaron Carroll, Indiana Univ. Sch. of Med., same URL)
NIGMS		NIH Rigor & Reproducibility Training Modules
	Long course (at least one)	https://www.nigms.nih.gov/training/pages/clearinghouse-for-training-modules-to-enhance-data-
		reproducibility.aspx
		Select additional course that best fits research focus [animal, human, in vitro, statistical, etc.]
COVID [as requ	ired each semeste	er - check your emails]
TrainTraq	2114136	Safe Practices for Returning/Coming to the Workplace During the COVID-19 Pandemic
TrainTraq	2114135	Protocol and Certification for System Member Employees

Required As Noted

Human subject	s [OPTIONAL]	
CITI		Select modules based on the study type
Animal Subject	s [REQUIRED for t	hose working with animals]
TrainTraq	2113134	Working with the IACUC (Alternate: CITI 17912 Working with the IACUC-Investigators, Staff & Students)
CITI		Reducing Pain and Distress in Laboratory Mice and Rats
Animal Subject	s [Species-specific	training]
CITI	17914	Post-Procedure Care of Mice and Rats in Research
TrainTraq	2113137	Working with Rats in Research Settings
Biosafety [REQ	JIRED for those w	ho have access to human cells or tissues]
TrainTraq	211486	BSL-2 Training - Biosafety (2211487) <u>https://rcb.tamu.edu/biohazards/training/bl2training</u>
TrainTraq	2114036	Blood Borne Pathogen (BBP) Training (may require a specific registration link)
TrainTraq	2111531	Effective Use of Class II Biological Safety Cabinets - Biosafety
		https://apps6.system.tamus.edu/TrainTrag/web/CourseDetails.aspx?cnum=2111531
Website	BOHP	Biosafety Occupational Health Program (enroll in it, not a course) https://bohp.tamu.edu/

Resources for Required Training Courses

CITI Trainings

- https://www.citiprogram.org/index.cfm?pageID=14&message=64#view
- Register for CITI account and select Texas A&M University as your institution. Follow directions in the site.

EHS Trainings

- <u>https://ehs.tamu.edu/how-do-i/register-for-laboratory-safety-training/</u>
- Enter with Net ID; under course catalog enter course name or number

TrainTraq Trainings

- Incoming students who are not employees will be granted access through a gateway with a temporary password (provided when courses are assigned). Employees access TrainTraq through SSO.
- <u>https://traintraq.tamus.edu/External/ExternalGatewayLogon.aspx</u>

NIGMS

• <u>https://www.nigms.nih.gov/training/pages/clearinghouse-for-training-modules-to-enhance-data-reproducibility.aspx</u>

BOHP

• <u>https://bohp.tamu.edu/</u>

Guidelines for Toxicology Graduate Studies at TAMU

<u>Academic Requirements</u>: Graduate courses require student attendance, participation and discussion. You must maintain a 3.00 GPA to be in good standing, and falling below that level can result in dismissal from the program. Academic dishonesty will not be tolerated.

Work Schedule: Report to the laboratory as requested. Graduate school hours are those of a regular 8 AM – 5 PM job and more unless you are instructed otherwise. Evening and weekend work is frequently required to complete the job or experiment. Remember, you are aspiring to become a professional, and professionals do not leave just because a clock indicates a particular time. Motivation, dedication, determination and long hours are required in graduate school and beyond.

<u>Lab Rules</u>: No food/beverages are allowed in the laboratories. Dress with safety in mind—wear closed shoes, eye protection and lab coats as instructed. No visitors, including spouses or relatives, are allowed in the laboratories without the permission of the professor in charge/primary investigator (PI).

<u>Vacation/Leave Time</u>: Clearance for leave from the workplace must be obtained in advance from the PI or the designated person in charge in the laboratory if the PI is unavailable. Report all sickness to the PI. Report any lab-related accidents/injuries to the PI as soon as possible. He or she will notify higher authorities if needed. Unauthorized leave may be considered abandonment.

Data and Laboratory Property: Original results and data belong to the PI. All laboratory notes must remain at Texas A&M University. Under no circumstances should data be disseminated without the consent and permission of the PI (including email, abstracts and publications). A student should never remove chemical or biological agents, books, laboratory files or software from the laboratory without the PI's permission. All students will help maintain the accuracy of the chemical inventory and laboratory supplies. MSDS information/safety precautions must be understood before a student is permitted to work with toxic chemicals.

<u>Lab Notebooks</u>: Notebooks should be maintained <u>in ink</u> in the style requested by the PI. Style may vary, but frequently includes Title, Hypothesis, Methods Outline (preparation of solutions, calculations, safety information, references, etc.), Results and Conclusions. Cross through, correct and initial errors.

<u>Meetings and Deadlines</u>: Each student should meet with their PI weekly or at the requested interval to discuss research and develop ideas or approaches for further study. At least once a month, the meeting should include discussion of the research data and progress, and the PI may wish to initial the laboratory notebook. Follow University guidelines for all other deadlines.

Reasons for immediate expulsion from the laboratory:

- Dishonesty / Falsification of data Failure to meet academic requirements
- Abandonment of the laboratory
- Failure to follow rules
- I certify that I have read and will adhere to the guidelines stated above, and that failure to do so could result in dismissal from the TAMU Toxicology Program.

Print Name	Signature	Date

Return copy with original signatures to the Toxicology Office, and retain a copy for your records

Toxicology Annual Graduate Student Evaluation and Progress Report

This report must be completed each year (<u>minimum requirement **one** committee meeting per year</u>) by the student and Graduate Advisory Committee, each completing the appropriate sections. The completed, signed report will be added to the student's permanent file in the Toxicology office.

Student:	Department:	UIN#
		Degree Program (MS/PhD):
Committee Chair:		
Date of entry into TOXI program:		
Date of Committee Meeting:		

For the Student (Complete and submit with this form):

- 1. Updated CV
- 2. Annual Effort Report for the <u>past year</u>. No specific requirements for format or length. Include coursework, research efforts, presentations, and manuscripts (submitted or published). You may include any efforts that contribute directly to your graduate education, anything that impeded your progress during this past year (e.g. illness, class not offered, research problems, etc.). Outline goals for your graduate program for the next 12 months, including coursework, research aims, methodology for your research aims, and any anticipated presentations or publications.

□ I have read and understand the comments provided by my committee and have no additional comments.

□ I have read and understand the comments provided by my committee and have the following comments (attach additional pages if needed):

Student Signature _____

Date _____

For the Graduate Advisory Committee:

Plan of Action to Correct Unsatisfactory Progress. Clearly state expectations for the coming year and how student must correct deficiencies. A 6-month follow-up committee meeting is strongly advised.

Assessment of Student Progress

Role	Signature	Printed Name	Progress (S/U)
Chair			
Co-Chair			
Member			

TOXI Graduate Student Record - PhD

Instructions: This sheet is to be completed by the student and Graduate Committee Chair and a copy kept in the student's file in the Toxicology Program office. It is designed to monitor the progress of the student and to ensure that all requirements are met for graduation. At the student's final defense, this completed sheet should be signed by all of the committee members to confer their agreement that all requirements for graduation have been met.

Student _____

UIN# _____

Graduate Committee Chair _____ Department _____

Date of entry into TOXI program _____

Requirement	Date	Initials:	
	Completed	Student:	Advisor:
Establish formal advisory committee			
Submit Degree Plan to Graduate School (by start of 3rd semester)			
Submit Research Proposal			
Complete Preliminary Examination			
Annual Committee Meetings: Year 1			
Year 2			
Year 3			
Year 4			
Year 5			
Departmental seminar			
Dissertation Presented to Committee Members			
Final Defense			
Final Dissertation Submitted to OGS			
Final Dissertation Approved by OGS			
Exit Interview			
Graduation			

Additional Department Specific Requirements	Date Completed	Initials: Student:	Advisor:
Peer-reviewed manuscripts (2) accepted for publication			

TOXI Graduate Student Record - MS

Instructions: This sheet is to be completed by the student and Graduate Committee Chair and a copy kept in the student's file in the Toxicology Program office. It is designed to monitor the progress of the student and to ensure that all requirements are met for graduation. At the student's final defense, this completed sheet should be signed by all of the committee members to confer their agreement that all requirements for graduation have been met.

Student	UIN#
Graduate Committee Chair	Department

Date of entry into TOXI program _____

Requirement	Date	Initials:	
	Completed	Student:	Advisor:
Establish formal advisory committee			
Submit Degree Plan to Graduate School (early in 2nd semester)			
Submit Research Proposal			
Annual Committee Meetings: Year 1			
Year 2			
Departmental Seminar			
Thesis presented to Committee Members			
Final Defense			
Final Thesis Submitted to OGS			
Final Thesis Approved by OGS			
Exit Interview			
Graduation			

Additional Department Specific Requirements	Date Completed	Initials: Student:	Advisor:
Peer-reviewed manuscripts (1) accepted for publication			

Revised May 2022

TOXI Annual Evaluation Rubric	Student: Fac. Member:			
Knowledge & Integrative Learning	Exemplary-4	Acceptable-3	Needs Improvement-2	Date: Beginning-1
Has clear understanding of the research	Advanced level of understanding of the research	Average level of understanding of the research	Developing level of understanding of the research	Beginning level of understanding of the research
Able to address questions professionally	Addresses questions with ease; incorporates information from the literature	Addresses questions well; knows most answers, does not cite literature	Marginal handling or questions; needs to prepare more	Uncomfortable with questions; does not know most answers
Objectives are clearly stated	Clear, well-focused objectives supported by data or literature	Objectives are clear, but more support info needed	Objectives need to be refined and supported with more information	Objectives are not clear, somewhat random collection of information
Lays out problem in introduction	Clearly defines scientific problem in introduction	Defines scientific problem in introduction	Weakly defines scientific problem in introduction	Inadequate explanation of scientific problem in introduction
Has scientifically valid arguments for objectives	Provides convincing data to support objectives	Provides some data to support objectives	Provides inconsistent data to support objectives	Provides inadequate or no data to support objectives
Describes and understands methodology	Thorough understanding and description of methodology	Understands and describes methodology	Weak understanding and description of experimental methodology	Poor understanding and description of methodology
Offers evidence of proof/disproof	Provides strong evidence in support of hypothesis	Provides some evidence to support hypothesis	Does not provide convincing evidence to support hypothesis	Provides no evidence in support of hypothesis
Depth of commentary appropriate for level of training	Commentary level advanced	Commentary level average	Commentary level needs improvement	Commentary level rudimentary

Critical & Ethical Reasoning Skills	Exemplary-4	Acceptable-3	Needs Improvement-2	Revised May 2022 Beginning-1
Clearly identifies and understands ethical issues	Appropriately identifies and responds to ethical issues	Usually identifies and responds to ethical issues	Identifies but does not act on ethical issues	No identification of ethical issues
Able to discuss theory and empirical evidence	Understands and can easily discuss theory and empirical evidence	Understanding of theory and empirical evidence, but no discussion of it	Minimal understanding of theory and empirical evidence, but no discussion of it	Weak understanding of theory or empirical evidence
Demonstrates understanding of toxicology	Advanced for level of training	Satisfactory for level of training	Needs improvement for level of training	Unsatisfactory for level of training
Summarizes potential weaknesses (if any) of findings	Provides good summary of potential weaknesses	Acknowledges potential weaknesses, no summary	Minimal recognition of potential weaknesses of findings, no summary	Fails to recognize weaknesses of findings

Communication

Good eye contact and body language	Engages audience with eye contact and gestures, seldom reads from slides	Few problems engaging audience, minor reading of slides	Some problems engaging audience and reading slides	Significant problems engaging audience and reading slides
Speaks clearly and at an understandable pace	Speaks clearly and at a comfortable pace	Slight problems with clarity and/or rushing the pace	Significant problems with clarity and/or rushing pace of presentation	Difficult to understand and/or races through presentation
Uses appropriate vocabulary and grammar	No or almost no vocabulary and grammatical errors (0-3)	Some vocabulary and grammatical errors (4-6)	Many vocabulary and grammatical errors (7-10)	Excessive vocabulary and grammatical errors (>10)
Limits use of filler words ("umm," "like")	No or almost no filler words (0-3)	Some filler words (4-6)	Many filler words (7-10)	Excessive filler words (>10)
Main ideas are presented in an orderly and clear manner	Main ideas clear and organized, supported by detailed information	Main ideas clear, organization of material could be improved	Presentation of main ideas is somewhat clear, not well- organized	Presentation of main ideas is not clear and organized
Text/Graphs/Figures are clear and understandable	Visually clear and understandable; graphics enhance text	Minor changes could improve clarity of presentation	Mostly clear and readable, some changes needed	Many changes needed to improve clarity of presentation

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TOXI Presentation Rubric

Revised May 2022

Student: _____

Fac. Member: ______ Date:

				Jale:
Presentation Skills	Exemplary-4	Acceptable-3	Needs Improvement-2	Beginning-1
Good eye contact and body language	Engages audience with eye contact and gestures, seldom reads from slides	Few problems engaging audience, minor reading of slides	Some problems engaging audience and reading slides	Significant problems engaging audience and reading slides
Delivery of information	Confident, delivers with ease; fully engages audience	Average delivery and engagement	Nervous, delivers information; needs to engage audience	Lacks confidence or is overly nervous, reads slides
Speaks clearly and at an understandable pace	Speaks clearly and at a comfortable pace	Slight problems with clarity and/or rushing the pace	Significant problems with clarity and/or rushing pace of presentation	Difficult to understand and/or races through presentation
Length of presentation was within assigned time limit	Well-adjusted to fit assigned time limit	Adequate for time limit	Does not fit assigned time limit	Violates time limit
Uses appropriate vocabulary and grammar	No or almost no vocabulary and grammatical errors (0-3)	Some vocabulary and grammatical errors (4-6)	Many vocabulary and grammatical errors (7-10)	Excessive vocabulary and grammatical errors (>10)
Well-rehearsed	Well-prepared and presentation flows smoothly	Rehearsed presentation, mostly smooth delivery	Somewhat rehearsed; room for improvement in delivery	Poorly rehearsed; presentation choppy or rambling
Limits use of filler words ("umm," "like")	No or almost no filler words (0-3)	Some filler words (4-6)	Many filler words (7-10)	Excessive filler words (>10)
<i>Presentation is appropriate for the topic and audience</i>	Well-adapted to topic and audience level	Adequately adapted to to to to to to to to the totologic and audience	Adaptation to topic and audience needs improvement	Poorly adapted to topic and audience
Main ideas are presented in an orderly and clear manner	Main ideas clear and organized, supported by detailed information	Main ideas clear, organization of material could be improved	Presentation of main ideas is somewhat clear, not well-organized	Presentation of main ideas is not clear and organized
Text/Graphs/Figures are clear and understandable	Visually clear and understandable; graphics enhance text	Minor changes could improve clarity of presentation	Mostly clear and readable, some changes needed	Many changes needed to improve clarity of presentation
Audio/visual components support main points/objectives	AV components strongly support objectives & tell story	Uses AV components throughout in support of objectives	AV components are used; only weakly support objectives	Few AV components, some connection to objectives

Methodology & Results	Exemplary-4	Acceptable-3	Needs Improvement-2	Revised May 2 Beginning-1
Has clear understanding of the research	Advanced level of understanding of the research	Average level of understanding of the research	Developing level of understanding of the research	Beginning level of understanding of the research
Appropriately defines background, relevance and technical terms for target audience	Clearly defined background, relevance and technical terms	Average background and relevance, defines some technical terms	Vague background and relevance; some technical terms not defined for target audience	Inadequate or missing background, relevance and defined terms
Objectives are clearly stated	Clear, well-focused objectives supported by data or literature	Objectives are clear, but more support info needed	Objectives need to be refined and supported with more information	Objectives are not clear, somewhat random collection of information
Lays out problem in introduction	Clearly defines scientific problem	Defines scientific problem in introduction	Weakly defines scientific problem	Inadequate explanation of scientific problem
Describes and understands methodology	Thorough understanding and description of methodology	Understands and describes methodology	Weak understanding and description of experimental methodology	Poor understanding and description of experimental methodology
Material is relevant to the overall message/purpose	Highly relevant material that conveys message/purpose	Sufficiently relevant, but needs stronger link to purpose	Material has some relevance but needs further development	Ideas unclear; material has minimal relevance to purpose
Presentation is appropriate for level of training	Strong; exceeds level of training	Good; appropriate for level of training	Adequate/developing; appropriate for level of training	Weak; needs improvement for level of training
Offers conclusion and provides future research direction	Strong conclusion completes story and provides future research direction	Conclusion completes story but does not provide future research direction	Conclusion partially completes story or fails to provide future direction	Weak conclusion fails to complete the story or provide future research direction
Able to address questions professionally	Addresses questions with ease; incorporates info from literature	Addresses questions well; knows most answers, does not cite literature	Marginal handling or questions; needs to prepare more	Uncomfortable with questions; does not know most answers

Revised May 2022

TOXI Oral Preliminary Exam Rubric (PhD only)

Student: _____

Fac. Member:	
Date:	

Presentation Skills	Exemplary-4	Acceptable-3	Needs Improvement-2	Beginning-1
Good eye contact and body language	Engages audience with eye contact and gestures, seldom reads from slides	Few problems engaging audience, minor reading of slides	Some problems engaging audience and reading slides	Significant problems engaging audience and reading slides
Uses appropriate vocabulary and grammar	No or almost no vocabulary and grammatical errors (0-3)	Some vocabulary and grammatical errors (4-6)	Many vocabulary and grammatical errors (7-10)	Excessive vocabulary and grammatical errors (>10)
Speaks clearly and at an understandable pace	Speaks clearly and at a comfortable pace	Slight problems with clarity and/or rushing the pace	Significant problems with clarity and/or rushing pace of presentation	Difficult to understand and/or races through presentation
Limits use of filler words ("umm," "like")	No or almost no filler words (0-3)	Some filler words (4-6)	Many filler words (7-10)	Excessive filler words (>10)
Objectives are clearly stated	Clear, well-focused objectives supported by data or literature	Objectives are clear, but more support info needed	Objectives need to be refined and supported with more information	Objectives are not clear, somewhat random collection of information
Presentation is appropriate for level of training	Strong; exceeds level of training	Good; appropriate for level of training	Adequate/developing; appropriate for level of training	Weak; needs improvement for level of training
Main ideas are presented in an orderly and clear manner	Main ideas clear and organized, supported by detailed information	Main ideas clear, organization of material could be improved	Presentation of main ideas is somewhat clear, not well-organized	Presentation of main ideas is not clear and organized
Text/Graphs/Figures are clear and understandable	Visually clear and understandable; graphics enhance text	Minor changes could improve clarity of presentation	Mostly clear and readable, some changes needed	Many changes needed to improve clarity of presentation

Methodology & Results	Exemplary-4	Acceptable-3	Needs Improvement-2	Revised May Beginning-1
Demonstrates understanding of toxicology	Advanced for level of training	Satisfactory for level of training	Needs improvement for level of training	Unsatisfactory for level of training
Appropriately defines background, relevance and technical terms for target audience	Clearly defined background, relevance and technical terms	Average background and relevance, defines some technical terms	Vague background and relevance; some technical terms not defined for target audience	Inadequate or missing background, relevance and defined terms
Able to address questions professionally	Addresses questions with ease; incorporates information from the literature	Addresses questions well; knows most answers, does not cite literature	Marginal handling or questions; needs to prepare more	Uncomfortable with questions; does not know most answers
Knowledge of the body of literature	Demonstrates understanding of literature	Good working knowledge of the literature	Some understanding of the literature	Weak understanding of the literature
Understanding of statistical and experimental design	Comprehends and explains experimental design and statistical design/analysis	Comprehends but does not explain experimental design or statistical design/analysis	Some understanding of experimental design or statistical design/analysis	Little understanding of experimental design or statistical design/analysis
Has scientifically valid arguments for objectives	Provides ample/convincing data to support objectives	Provides some data to support objectives	Provides inconsistent data to support objectives	Provides inadequate or no data to support objectives
Describes and understands methodology	Thorough understanding and description of experimental methodology	Understands and describes methodology	Weak understanding and description of experimental methodology	Poor understanding and description of experimental methodology
Offers conclusion and provides future research direction	Strong conclusion completes story and provides future research direction	Conclusion completes story but does not provide future research direction	Conclusion partially completes story or fails to provide future direction	Weak conclusion fails to complete the story or provide future research direction

Revised May 2022

TOXI Final Exam/Defense Rubric (PhD and MS)

Student: ______ Fac. Member: ______

Date: _____

Communication	Exemplary-4	Acceptable-3	Needs Improvement-2	Beginning-1
Good eye contact and body language	Engages audience with eye contact and gestures, seldom reads from slides	Few problems engaging audience, minor reading of slides	Some problems engaging audience and reading slides	Significant problems engaging audience and reading slides
Speaks clearly and at an understandable pace	Speaks clearly and at a comfortable pace	Slight problems with clarity and/or rushing the pace	Significant problems with clarity and/or rushing pace	Difficult to understand and/or rushing pace
Uses appropriate vocabulary and grammar	No or almost no vocabulary and grammatical errors (0-3)	Some vocabulary and grammatical errors (4-6)	Many vocabulary and grammatical errors (7-10)	Excessive vocabulary and grammatical errors (>10)
Objectives are clearly stated	Clear, well-focused objectives supported by data or literature	Objectives are clear, but more support info needed	Objectives need to be refined and supported with more information	Objectives are not clear, somewhat random collection of information
Main ideas are presented in an orderly and clear manner	Main ideas clear and organized, supported by detailed information	Main ideas clear, organization could be improved	Main ideas are somewhat clear, not well-organized	Presentation of main ideas is not clear and organized
Text/Graphs/Figures are clear and understandable	Visually clear and understandable; graphics enhance text	Minor changes could improve clarity of presentation	Mostly clear and readable, some changes needed	Many changes needed to improve clarity of presentation
Dissertation/Thesis clearly written	Clearly written	Little revision needed	Moderate revision needed	Much revision needed
Knowledge of the body of literature	Demonstrates understanding of literature	Good working knowledge of the literature	Some understanding of the literature	Weak understanding of the literature
Demonstrates understanding of toxicology	Advanced for level of training	Satisfactory for level of training	Needs improvement for level of training	Unsatisfactory for level of training

Critical & Ethical Reasoning Skills

Clearly identifies and understands ethical issues	Appropriately identifies & responds to ethical issues	Usually identifies and responds to ethical issues	Identifies but does not act on ethical issues	No identification of ethical issues
Able to discuss theory and empirical evidence	Understands and can easily discuss theory and empirical evidence	Understanding of theory and empirical evidence, but no discussion of it	Minimal understanding of theory and empirical evidence, no discussion of it	Weak understanding of theory or empirical evidence
Makes recommendations for further work on project	Makes strong recommendations for further experiments	Makes adequate recommendations for further experiments	Makes some recommendations for further experiments	Makes few/weak recommendations for further experiments
Able to propose solutions to problems	Actively seeks and proposes solutions	Proposes some solutions	Improves on solutions suggested by others	Does not offer solutions, but tries suggestions

Revised May 2022 **Knowledge & Integrative Learning Exemplary-4** Acceptable-3 **Needs Improvement-2** Beginning-1 Has clear understanding of the research Advanced level of Average level of Developing level of Beginning level of understanding of the understanding of the understanding of the research understanding of the research research research Appropriately defines background, relevance Clearly defined background, Average background and Vague background and Inadequate or missing relevance and technical relevance, defines some relevance; some technical background, relevance and and technical terms for target audience technical terms terms not well-defined defined terms terms Addresses questions with Able to address questions professionally Addresses questions well; Marginal handling or Uncomfortable with ease; incorporates knows most answers, does questions; needs to prepare questions; does not know information from the not cite literature more most answers literature Clearly demonstrates ability Capable of designing and Shows developing ability to Early level ability to design Ability to design and conduct independent and conduct independent to design and conduct conducting independent design and conduct research independent research research independent research research

Research Practices

Describes and understands methodology	Thorough understanding and description	Understands and describes methodology	Weak understanding and description	Poor understanding and description
Able to develop hypothesis-driven experiments	Clear hypothesis with experiments designed around it	Clear hypothesis but weak experimental design	Hypothesis is confusing or unclear	Does not offer a clear hypothesis
Understands limitations	Discusses reasons against argument and explains validity	Discusses reasons against argument but not their validity	Suggests but does not discuss reasons against argument	Does not acknowledge or discuss reasons against argument
Ability to participate as a member of a research team	Proactively contributes and works to complete group goals	Offers ideas and asks questions as a team member	Sometimes offers ideas and asks questions of team	Rarely contributes to team with questions or ideas
Keeps accurate and thorough records	Records are accurate and thorough	Records are organized and mostly complete	Records contain some errors and omissions	Records poorly organized; errors and omissions
Shows initiative to undertake new tasks	Strong initiative to take on new tasks	Takes initiative to begin new tasks	Weak initiative to take on new tasks	No initiative to take on new tasks

T32 Postdoc Appointment Workflow

Call for Nominations

A call for T32 postdoctoral candidates is announced in late April with a May 15 deadline. Candidates may be nominated by participating T32 mentors/co-mentors. Applications may also be submitted at other times of the year, and will be considered at the quarterly executive committee meetings. Applications are submitted to the Toxicology Program Coordinator, and must include the following:

- Transcripts
- Personal statement of interest in regulatory science
- Recommendation letters (minimum of three)
- Detailed CV
- Nomination letter from prospective faculty mentor

Eligibility and Requirements:

Only US citizens and resident aliens are eligible. Preference is given to candidates no more than two years post receipt of doctoral degree. Support will be offered for 1 year with a possibility of extension for a second year pending renewal of the grant. The postdocs must participate in all activities of the TOXI program including seminars and auditing of courses, and are required to apply for an F32 or a similar award in their first year.

Review Process of Eligible Candidates:

Prospective postdoctoral candidate application packets are submitted as PDF files to the T32 executive committee. Each member evaluates and ranks the candidates and submits their rankings and comments to the Toxicology Program Coordinator in late May. Rankings and comments are compiled.

Postdoc Offers:

Offers are based on the evaluation and rankings and are extended in writing with a deadline for acceptance of the offer. Most T32 postdoc terms are 7/1 - 6/30, which matches the cycle of grant funding.

Appointment and Setup Processes:

Official appointment to the T32 is done through eRA Commons. The Program Coordinator requests a Commons username from the SRS Grant Administrator. Once that is received, the postdoc sets up their profile in Commons. The Program Coordinator can then process the following with the candidate:

- **Statement of Appointment** initiated by the Program Coordinator in Commons xTrain. The form routes electronically to the Postdoc, the T32 PI, SRS Project Administrator, and finally to the agency.
- **Payback Agreement** A payback agreement is required for the first year of a T32 postdoctoral fellowship. This is both a service and financial payback. This is a paper form completed by the postdoctoral fellow and submitted to the agency <u>via USPS mail</u> by the Program Coordinator.
- TPEP Supplement The TAMU Office of the Vice President for Research has a Part-Time Employment Program (TPEP) for NRSA Postdoctoral Fellows. Through this program, fellows receive supplemental pay of > \$20,000 (50% from the fellow's PI, and 50% from the VPR) to compensate for loss of benefits. A request for support is made via memo from the T32 PI to the VPR (through the department head,

associate dean and dean). This is a provision of 25% employment in addition to the fellowship. This is processed through TAMU payroll in the department/college of the postdoctoral fellow's mentor.

- Postdoctoral Fellow Certification TAMU HROE requires that a Postdoctoral Fellows/Graduate Student Fellows Certification form be completed. This is usually obtained from the HR team. The form requires certification by the department head and an agent in the Division of Research, and allows the postdoctoral fellow to obtain TAMU health insurance. Because the fellow is not employed at a percentage to receive the state contribution for health insurance, the entire cost of the policy is billed to them each month. It is possible to set up insurance through the 25% employment, however reimbursement of the health insurance is complicated in that case.
- SRS Participant Stipend Payment Form This form is required by SRS for the fellow to receive a monthly stipend. It needs to be set up in the same timeframe as the statement of appointment, as it must be approved before a monthly stipend request may be submitted. The form requires the approval of both the SRS Project Administrator and Assistant Director.
- SRS Independent Contractor Invoice (ICI) This form is submitted for each postdoctoral fellow each month for payment of the fellowship stipend. It requires signatures of the postdoc and the PI. On approximately the 15th of the month, the Program Coordinator submits the form to the VIBS Business Team for payment. The Business Team submits it to AggieBuy, several levels of approval are required, and payment is made late in the month.

These processes require the cooperation of CVM HR, the VIBS Business Office, Office of the Vice President for Research, TAMU HROE, and the Toxicology Office. Start early as there are always some wrinkles and delays in orchestrating all these components.

Other Considerations:

- Income taxes tax is not withheld from the T32 fellowship funds, however the fellow is still
 responsible for paying federal income tax. It may be possible to have additional tax withheld from the
 TPEP supplement, but if not, fellows should contact a tax professional to determine how to make
 quarterly tax payments. Failure to do so may result in tax penalties.
- **Health insurance** the fellow can get the equivalent of TAMU employee insurance, but must pay the entire premium amount out of pocket and submit receipts monthly for reimbursement. If insurance is set up through the TPEP employment, reimbursement requires extra documentation.

Reappointment:

The fellow <u>may</u> be reappointed for a second year, and if so, a reappointment must be processed in Commons xTrain. It is a streamlined Statement of Appointment form. The payback agreement does not need to be repeated, however the TPEP supplement process, SRS Participant Stipend forms and ICI forms must be set up.

Termination:

When the fellow is nearing the end of their T32 appointment, the Program Coordinator initiates a Termination Notice in Commons xTrain. This requires a summary from the fellow, and once complete, routes to the fellow, the T32 PI, SRS Project Administrator, and the agency.