



TEXAS A&M UNIVERSITY  
Entomology



UNDERGRADUATE MAJORS

# HOWDY!

The Department of Entomology offers two undergraduate degrees, a traditional major in Entomology (ENTO) and a major in Forensic and Investigative Sciences (FIVS). Undergraduate degrees prepare students for graduate and professional schools and depending upon the degree plan for a wide variety of career opportunities. The Department is one of the top entomology departments in the United States based on its outstanding students, staff and faculty, excellent facilities, and exceptionally diverse programs that improve lives throughout Texas, the region, and the world.

Forensic and Investigative Sciences, an accredited program by the Forensic Science Education Programs Accreditation Commission (FEPAC), is a major offered by the Department of Entomology and is a growing area of interest for students seeking to gain entry into careers that deal with the collection, preservation, processing and use of evidentiary information to solve crimes and civil disputes. Our FIVS program is currently ranked #1 as the Best Forensic Science Program by Bachelor's Degree Center.

Leadership skills are developed through participation in a wide array of extracurricular activities, including Departmental clubs, judging teams, and continuing education/youth programs. A substantial number of students gain experience in a variety of disciplines and are able to pay for part of their college expenses through part-time employment in the Department, University, or as recipients of Departmental scholarships.

Our department provides students with a world-class education that they can apply towards careers in entomology, forensic and investigative sciences, urban and public health entomology, and academia.

# Department of Entomology Administration

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## Department of Entomology Undergraduate Advisors

Please scan the QR code below for our Advisor Contact Information:



Advising Hours: 9:00 a.m. to 11:30 a.m. and  
1:30 p.m. to 4:00 p.m.

To schedule an appointment, visit our website:  
[entomology.tamu.edu](http://entomology.tamu.edu)

# **Degree Plans**

## **Entomology**

Entomology is the study of insects and their relationship to humans, the environment, and other organisms. Entomologists make great contributions to such diverse fields as agriculture, chemistry, biology, human/animal health, molecular science, criminology, and forensics. The study of insects serves as the basis for developments in biological and chemical pest control, food and fiber production and storage, pharmaceuticals, epidemiology, biological diversity, and a variety of other fields of science.

## **Forensic and Investigative Sciences**

### **Science Emphasis (FEPAC Accredited)**

The Science Emphasis develops skills in problem solving and critical thinking. Forensic and investigative scientists rely upon state-of-the-art scientific discoveries and technologies as tools to seek answers to critical questions in a variety of settings. Molecular, organismal, environmental, and ecological sources of information are often analyzed and interpreted in industrial, regulatory, legal, medical and associated professions. Graduates will be competitive for employment opportunities in quality assurance laboratories, homeland security and investigative services at local, state and national levels. Students will be prepared for opportunities to enter post-graduate studies or professional schools including medicine, law, and veterinary medicine.

### **Law Emphasis**

This track provides pre-law students with a solid scientific foundation while also preparing them for success in law school. Ultimately, our goal is to empower students to more effectively practice law in arenas where science will play a critical role in the judicial process. We aim to educate and train Aggies as the next generation of lawyers, judges, and policy makers that are best able to critically evaluate scientific research and apply these concepts to the evaluation of evidence, in order to improve the application of justice for all. Students in this major have successfully completed their Juris Doctor (J.D.) degrees at top law schools.

## B.S. in Entomology Freshmen Year Course Schedule

FALL SEMESTER		SPRING SEMESTER	
ENGL 104	3HRS	Communication Elective	3HRS
BIOL 111	4HRS	BIOL 112	4HRS
MATH 140	3HRS	MATH 142	3HRS
HIST 105	3HRS	HIST 106	3HRS
ENTO 101	1HRS	ENTO 102	1HR

## B.S. in Forensic & Investigative Sciences Science Emphasis Freshmen Year Course Schedule

FALL SEMESTER		SPRING SEMESTER	
FIVS 101	1HR	BIOL 112	4HRS
BIOL 111	4HRS	CHEM 120	4HRS
CHEM 119	4HRS	MATH 142	3HRS
MATH 140	3HRS	ENGL 104	3HRS
FIVS 205	3HRS	FIVS 102	1HR

## B.S. in Forensic & Investigative Sciences Law Emphasis Freshmen Year Course Schedule

FALL SEMESTER		SPRING SEMESTER	
FIVS 101	1HR	BIOL 112	4HRS
BIOL 111	4HRS	US History Elective	3HRS
Communication Elective	3HRS	MATH 142 OR PHIL 240	3HRS
MATH 140	3HRS	ENGL 104	3HRS
FIVS 205	3HRS	FIVS 102	1HR
		Creative Arts Elective	3HRS

# Freshman Admissions

## Steps to Apply to Texas A&M University

1. Apply through [applytexas.org](http://applytexas.org)
2. Receive a UIN (User ID Number)
3. Log on to AIS at [applicant.tamu.edu](http://applicant.tamu.edu)
4. Check Status of Application
5. Upload Documents
  - a.) Application
  - b.) Official High School Transcript
  - c.) SAT/ACT Scores
6. Optional
  - Letter of Recommendation
  - Resumes

## Once Admitted, Submit:

- Proof of Vaccination
- Final High School Transcript
- Official College Transcript (if applicable, dual credit)



TEXAS A&M UNIVERSITY

Entomology

# How to be Admitted - Freshman

1. **Top 10% Admission** -- Texas residents who rank in the top 10% of their graduating class qualify for automatic admission to any state school in Texas.
2. **Holistic Review** -- If you do not qualify for top 10%, but meet the [State of Texas Uniform Admission Policy](#), your application file, which includes all factors you noted, will be reviewed in a holistic manner.
  - Academic factors include all high school courses attempted and grades earned, rigor of coursework, GPA and class rank.
  - Non-academic factors include involvement in extracurricular activities, community service, leadership, employment, and summer activities as well as extraordinary opportunities, challenges and hardships experienced during high school career.

Students applying for fall admission may receive a decision within a month of file completion. However, applying early does not guarantee an early decision. Generally, most students in review will receive a decision between January 1 and late March.

3. **Out of State**
  - Most Out-of-State students are admitted through the holistic review process. Read holistic review qualifications in the In-State Student section above.
  - Texas residents completing high school in another state may qualify for Top 10% automatic admission. Submit a [residency questionnaire](#) to determine eligibility.

**Please note that the FIVS program does not participate in the University's PSA or PTA programs.**

**\*\*Make sure to apply early\*\***

# How to be Admitted - Transfer Students

## BS - Entomology

### Required Coursework for Admission

Course Name	Hrs.	TCCNS	TAMU
Business Math I	3	MATH 1324	MATH 140/141
Business Math II	3	MATH 1325	MATH 142
Biology I	4	BIOL 1406	BIOL 111
Biology II	4	BIOL 1407	BIOL 112

- Students may have to complete College Algebra (MATH 1314) at their institution before taking MATH 1324 or 1325.
- College Algebra is a transferable course but **will not** satisfy the Mathematics requirements in this degree plan.

The recommendations below represent what a typical TAMU student's schedule looks like during the first four semesters. If working to complete an Associate's Degree before transferring, please align your degree plan to satisfy TAMU degree requirements. You may not have to complete the coursework in the sequence below but this major requires or recommends specific coursework to be completed.

### First Year

FALL SEMESTER				SPRING SEMESTER				
TCCNS	TAMU	Course Name	Hrs.	TCCNS	TAMU	Course Name	Hrs.	
BIOL 1406 (1306/1106)	BIOL 111	Biology I	4	BIOL 1407 (1307/1107)	BIOL 112	Biology II	4	
CHEM 1411 (1311/1111)	CHEM 119	Chemistry I	4	CHEM 1412 (1312/1112)	CHEM 120	Chemistry II	4	
MATH 1324	MATH 140	Business Math I	3	MATH 1325	MATH 142	Business Math II	3	
NTRNS	ENTO 201	General Entomology	3		<a href="http://core.tamu.edu">core.tamu.edu</a>	Communication	3	
			<b>Total</b>	<b>14</b>			<b>Total</b>	<b>14</b>

### Second Year

FALL SEMESTER				SPRING SEMESTER				
TCCNS	TAMU	Course Name	Hrs.	TCCNS	TAMU	Course Name	Hrs.	
CHEM 2470	CHEM 222	Elements of Organic & Biological Chemistry	3		<a href="http://core.tamu.edu">core.tamu.edu</a>	Communication	3	
NTRNS	ENTO 482	Occupational and Professional Development	2		<a href="http://core.tamu.edu">core.tamu.edu</a>	Philosophy, Language & Culture	3	
	<a href="http://core.tamu.edu">core.tamu.edu</a>	Social & Behavioral Sciences	3		<a href="http://core.tamu.edu">core.tamu.edu</a>	American History	3	
	<a href="http://core.tamu.edu">core.tamu.edu</a>	American History	3	GOVT 2306	POLS 207	State & Local Government	3	
GOVT 2305	POLS 206	American National Government	3	NTRNS		Technical Elective	3	
			<b>Total</b>	<b>14</b>			<b>Total</b>	<b>15</b>

### Coursework Timeline

- Competitive applicants will have the required coursework completed by the application deadline.
- Applicants to the fall term **may be** asked to submit spring final grades, this is not a guarantee.
- Summer coursework **will not** be considered for fall applicants.
- Fall coursework **will not** be considered for spring applicants.
- Applicants to the spring term should have the required coursework completed by the end of Summer II semester before applying.

### Additional Information

- Applicants should complete an essay at the time of application indicating why they are choosing ENTO and how a degree in ENTO will help them fulfill their long-term educational and career goals.
- Applicants are encouraged to contact an academic advisor if they have any questions.
- Please contact department regarding second-choice major consideration before applying.
- Highly recommend meeting with an academic advisor prior to submitting the application.
- For information regarding Transfer Course Equivalency, please refer to the following website: <https://compassweb.ssb.tamu.edu/HCAVssb/transferCourseEquivalency/#/>

### Career & Educational Opportunities

Entomology is the basic and applied science of insects and their relatives such as ticks and mites. Insects are the most numerous and diverse forms of life on earth; they are essential constituents of virtually every terrestrial and aquatic ecosystem. While society benefits from the many diverse roles played by the vast majority of insects, some species may become limiting factors in the production, processing and storage of our food and fiber crops, and to the health and wellbeing of humans and animals. The knowledge and skills possessed by entomologists are essential components of modern integrated pest management strategies designed to safely and efficiently produce adequate food supplies for a continuously expanding world population, and to impede the transmission of insect-borne diseases, while at the same time protecting our endangered species and fragile ecosystems. For more information please visit [careercenter.tamu.edu](http://careercenter.tamu.edu).

Discover Entomology - <https://www.entsoc.org/sites/default/files/files/discover.pdf>

For information regarding Careers in Entomology, please visit the following websites: <https://www.entsoc.org/listjobs> and <https://www.entsoc.org/sections>

For information regarding professional affiliations in the field of Entomology, please visit the following website: <https://entomology.tamu.edu/professional-affiliations/>.

# How to be Admitted - Transfer Students

## BS – Forensic & Investigative Sciences

### Law Emphasis

Required Coursework for Admission (Common Body of Knowledge = CBK)

Course Name	Hrs.	TCCNS	TAMU
Business Math I	3	MATH 1324	MATH 140/141
Business Math II	3	MATH 1325	MATH 142
Chemistry I	4	CHEM 1411	CHEM 119
Organic Chemistry	3	N/A	CHEM 222
Biology I	4	BIOL 1406	BIOL 111
Biology II	4	BIOL 1407	BIOL 112
Communication Elective	3		<a href="http://core.tamu.edu">core.tamu.edu</a>

- CHEM 227 (TCCNS: CHEM 2470) may be substituted for CHEM 222
- Courses listed must be completed with a grade of **C or better**.
- Students may have to complete College Algebra (MATH 1314) at their institution before taking MATH 1324 or 1325.
- College Algebra is a transferable course but **will not** satisfy the Mathematics requirements in this degree plan, and will count toward the total credit hours.

The schedule below represents what a typical TAMU FIVS student's schedule looks like during their first four semesters. If working to complete an Associate's Degree before transferring, please align your degree plan to satisfy TAMU degree requirements. You may not have to complete the coursework in the sequence below but this major requires or recommends specific coursework to be completed.

#### First Year

FALL SEMESTER				SPRING SEMESTER					
TCCNS	TAMU	Course Name	Hrs.	TCCNS	TAMU	Course Name	Hrs.		
BIOL 1406 (1306/1106)	BIOL 111	Biology I	4	BIOL 1407 (1307/1107)	BIOL 112	Biology II	4		
Communication Elective	<a href="http://Core.tamu.edu">Core.tamu.edu</a>		3	Creative Arts Credit	<a href="http://Core.tamu.edu">Core.tamu.edu</a>		3		
MATH 1324	MATH 140/141	Business Math I	3	MATH 1325	MATH 142	Business Math II	3		
NTRNS	FIVS 205	Intr. To Forensic & Investigative Science	3		<a href="http://core.tamu.edu">core.tamu.edu</a>	Communication	3		
					<a href="http://core.tamu.edu">core.tamu.edu</a>	History Elective	3		
			<b>Total</b>	<b>13</b>				<b>Total</b>	<b>16</b>

#### Second Year

FALL SEMESTER				SPRING SEMESTER					
TCCNS	TAMU	Course Name	Hrs.	TCCNS	TAMU	Course Name	Hrs.		
NTRNS	FIVS 215	Forensic Microscopy	2	CHEM XXX	CHEM 222	Organic Chemistry	4		
CHEM 1411	CHEM 119	Chemistry I	4	NTRNS	FIVS 220	Impression Evidence	2		
NTRNS	FIVS 210	Forensic Photography	2	GOVT 2306	POLS 207	State and Local	3		
GOVT 2305	POLS 206	Federal Government	3		<a href="http://core.tamu.edu">core.tamu.edu</a>	Language, Philosophy & Culture	3		
	<a href="http://core.tamu.edu">core.tamu.edu</a>	Social & Behavioral Science	3		<a href="http://core.tamu.edu">core.tamu.edu</a>	History Elective	3		
			<b>Total</b>	<b>14</b>				<b>Total</b>	<b>15</b>

Transfer applicants are encouraged to complete University Core Curriculum coursework found in the Undergraduate Catalog at Texas A&M University.

- Consider taking courses that fulfill the 3 hours of [International and Cultural Diversity requirement](#) and 3 hours of [Cultural Discourse course requirement](#) when completing the Social and Behavioral Sciences, free electives and Creative Arts requirements.

For further information please refer to the Forensics and Investigative Sciences transfer information website at [entomology.tamu.edu/forensic-investigative-sciences/transfer-requirements/](http://entomology.tamu.edu/forensic-investigative-sciences/transfer-requirements/).

#### Coursework Timeline

- Competitive applicants will have the required coursework completed by the application deadline.
- Applicants to the fall term **may be** asked to submit spring final grades, a request for spring grades is not a guarantee for admission.
- Summer coursework **will not** be considered for fall applicants.
- Fall coursework **will not** be considered for spring applicants.
- Applicants to the spring term should have the Recommended or Required coursework completed by the end of Summer II semester before applying.

#### Additional Transfer Requirements

**Transfer Applicants with less than 45 hours must have the following courses complete at the time of application**

- 2 of CHEM 119, BIOL 111 and BIOL 112
- 1 of MATH 140 or 142
- Min. 1 other CBK courses
- 2.5 GPA Overall

**Transfer Applicants with 46-65 hours must have the following courses complete at the time of application**

- All CBKs completed
- 2.5 GPA Overall
- **Applicants will not be admitted above 65 hours**

#### Additional Information

- All required courses must be completed at the time of application
- 2.5 GPA on all coursework with no grade of D, F or U.
- The FIVS program **DOES NOT** participate in the PSA or PTA programs offered through TAMU.
- Contacting an academic advisor in this department is strongly recommended prior to application.

#### Career & Educational Opportunities

In this major students learn how to use the life sciences, from DNA to ecology, to analyze crime scene evidence or solve mysteries in industrial, regulatory, or medical settings. This major is excellent for students seeking to gain entry into careers that deal with the collection, preservation, processing and use of evidentiary information to solve problems. Forensic and investigative scientists rely upon state-of-the-art scientific discoveries and technologies as tools to seek answers to critical questions in a variety of settings. Molecular, organismal, environmental, and ecological sources of information are often analyzed and interpreted in industrial, regulatory, legal, medical and associated professions. Graduates will be competitive for employment opportunities in quality assurance laboratories, homeland security and investigative services at local, state and national levels. Graduates will also be well prepared for opportunities to enter post-graduate studies or professional schools including medicine, law, and veterinary medicine. For more information please visit [careercenter.tamu.edu](http://careercenter.tamu.edu).

For information regarding Careers in Forensic and Investigative Sciences, please visit the following websites: [forensics.tamu.edu/careers/](http://forensics.tamu.edu/careers/) and [www.bls.gov/ooah/life-physical-and-social-science/forensic-science-technicians.htm](http://www.bls.gov/ooah/life-physical-and-social-science/forensic-science-technicians.htm)

For information regarding professional affiliations in the field of Forensic and Investigative Sciences, please visit the following website: [www.aafs.org/](http://www.aafs.org/)

#### Transfer Course Sheet Notes

1. Admission preference is given to applicants with the highest GPA and the most appropriate courses completed.
2. Transfer applicants are encouraged to complete [University Core Curriculum](#) coursework found in the [Undergraduate Catalog](#) **unless** specified above.
3. This Transfer Course Sheet was supported in a partnership between The Office of Admissions and the College of Agriculture & Life Sciences at Texas A&M University with the Undergraduate Catalog having the most extant and definitive information.



# BS – Forensic & Investigative Sciences Science Emphasis

## Required Coursework for Admission (Common Body of Knowledge = CBK)

Course Name	Hrs.	TCCNS	TAMU
Business Math I	3	MATH 1324	MATH 140/141
Business Math II	3	MATH 1325	MATH 142
Chemistry I	4	CHEM 1411	CHEM 119
Chemistry II	4	CHEM 1412	CHEM 120
Biology I	4	BIOL 1406	BIOL 111
Biology II	4	BIOL 1407	BIOL 112
Physics I	4	PHYS 1401	PHYS 201
Physics II	4	PHYS 1402	PHYS 202
Organic Chemistry I	4	CHEM 2423	CHEM 227/237
Organic Chemistry II	4	CHEM 2425	CHEM 228/238
Communication Elective	3		<a href="http://core.tamu.edu">core.tamu.edu</a>

- Courses listed must be completed with a grade of **C or better**.
- Students may have to complete College Algebra (MATH 1314) at their institution before taking MATH 1324 or 1325.
- College Algebra is a transferable course but **will not** satisfy the Mathematics requirements in this degree plan, and will count toward the total credit hours.

The schedule below represents what a typical TAMU FIVS student's schedule looks like during the first four semesters. If working to complete an Associate's Degree before transferring, please align your degree plan to satisfy TAMU degree requirements. You may not have to complete the coursework in the sequence below but this major requires or recommends specific coursework to be completed.

### First Year

FALL SEMESTER				SPRING SEMESTER			
TCCNS	TAMU	Course Name	Hrs.	TCCNS	TAMU	Course Name	Hrs.
BIOL 1406 (1306/1106)	BIOL 111	Biology I	4	BIOL 1407 (1307/1107)	BIOL 112	Biology II	4
CHEM 1411 (1311/1111)	CHEM 119	Chemistry I	4	CHEM 1412 (1312/1112)	CHEM 120	Chemistry II	4
MATH 1324	MATH 140/141	Business Math I	3	MATH 1325	MATH 142	Business Math II	3
NTRNS	FIVS 205	Intr. To Forensic & Investigative Science	3		<a href="http://core.tamu.edu">core.tamu.edu</a>	Communication	3
			<b>Total</b>				<b>14</b>
			<b>14</b>				<b>14</b>

### Second Year

FALL SEMESTER				SPRING SEMESTER			
TCCNS	TAMU	Course Name	Hrs.	TCCNS	TAMU	Course Name	Hrs.
CHEM 2323/2423	CHEM 227/237	Organic Chemistry I	4	CHEM 2325/2425	CHEM 227/237	Organic Chemistry II	4
PHYS 1401 (1301/1101)	PHYS 201	College Physics I	4	PHYS 1402 (1302/1102)	PHYS 202	College Physics II	4
	<a href="http://core.tamu.edu">core.tamu.edu</a>	American History	3		<a href="http://core.tamu.edu">core.tamu.edu</a>	American History	3
	<a href="http://core.tamu.edu">core.tamu.edu</a>	Communication	3		<a href="http://core.tamu.edu">core.tamu.edu</a>	Language, Philosophy & Culture	3
			<b>Total</b>				<b>14</b>
			<b>14</b>				<b>14</b>

Transfer applicants are encouraged to complete University Core Curriculum coursework found in the Undergraduate Catalog at Texas A&M University.

- Consider taking courses that fulfill the 3 hours of [International and Cultural Diversity requirement](#) and 3 hours of [Cultural Discourse course requirement](#) when completing the Social and Behavioral Sciences, free electives and Creative Arts requirements.

For further information please refer to the Forensics and Investigative Sciences transfer information website at [entomology.tamu.edu/forensic-investigative-sciences/transfer-requirements/](http://entomology.tamu.edu/forensic-investigative-sciences/transfer-requirements/).

#### Coursework Timeline

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- Applicants to the fall term **may be** asked to submit spring final grades, this is not a guarantee.
- Summer coursework **will not** be considered for fall applicants.
- Fall coursework **will not** be considered for spring applicants.
- Applicants to the spring term should have the Recommended or Required coursework completed by the end of Summer II semester before applying.

#### Additional Transfer Requirements

**Transfer Applicants with less than 45 hours must have the following courses complete at the time of application**

- CHEM 119 and 120
- Min. 2 other science courses from the Common Body of Knowledge (CBK) list
- Min. 2 other CBK courses
- 3.0 GPA Overall

**Transfer Applicants with 46-65 hours must have the following courses complete at the time of application**

- All CBKs completed
- 3.0 GPA Overall
- **Applicants will not be admitted above 65 hours**

#### Additional Information

- All required courses must be completed at the time of application
- 3.0 GPA on all coursework with no grade of D, F or U.
- The FIVS program **DOES NOT** participate in the PSA or PTA programs offered through TAMU.
- Contacting an academic advisor in this department is strongly recommended prior to application.

#### Career & Educational Opportunities

In this major students learn how to use the life sciences, from DNA to ecology, to analyze crime scene evidence or solve mysteries in industrial, regulatory, or medical settings. This major is excellent for students seeking to gain entry into careers that deal with the collection, preservation, processing and use of evidentiary information to solve problems. Forensic and investigative scientists rely upon state-of-the-art scientific discoveries and technologies as tools to seek answers to critical questions in a variety of settings. Molecular, organismal, environmental, and ecological sources of information are often analyzed and interpreted in industrial, regulatory, legal, medical and associated professions. Graduates will be competitive for employment opportunities in quality assurance laboratories, homeland security and investigative services at local, state and national levels. Graduates will also be well prepared for opportunities to enter post-graduate studies or professional schools including medicine, law, and veterinary medicine. For more information please visit [careercenter.tamu.edu](http://careercenter.tamu.edu).

For information regarding Careers in Forensic and Investigative Sciences, please visit the following websites: [forensics.tamu.edu/careers/](http://forensics.tamu.edu/careers/) and [www.bls.gov/ooh/life-physical-and-social-science/forensic-science-technicians.htm](http://www.bls.gov/ooh/life-physical-and-social-science/forensic-science-technicians.htm)

For information regarding professional affiliations in the field of Forensic and Investigative Sciences, please visit the following website: [www.aafs.org/](http://www.aafs.org/)

#### Transfer Course Sheet Notes

1. Admission preference is given to applicants with the highest GPA and the most appropriate courses completed.
2. Transfer applicants are encouraged to complete [University Core Curriculum](#) coursework found in the [Undergraduate Catalog](#) **unless** specified above.
3. This Transfer Course Sheet was supported in a partnership between The Office of Admissions and the College of Agriculture & Life Sciences at Texas A&M University with the Undergraduate Catalog having the most extant and definitive information.



# Minimum Guidelines for Continuing Forensic & Investigative Science-SCE Students

(Revised for Fall 2013, Modified June 2015 – Programmatic oversight team reviews policies regularly and communicate updates to students via official TAMU communication channels)

1. Freshman must maintain a 2.75 cumulative GPR at all times or they may be subject to probationary terms or dismissal.
2. Sophomores, Juniors, and Seniors must maintain a 3.0 cumulative GPR at all times or they may be subject to probationary terms or dismissal.
3. Student must enroll in and successfully complete (with a “C” or better) a minimum of one science course per semester.

-The Grade Point Ratio (GPR) is the total number of grade points divided by the total attempted hours at TAMU

-Classifications determined by student rules 13.1-.3 at: <http://student-rules.tamu.edu/rule13>

## Statement of Curricular Responsibility

- Students are expected to complete courses in the semester they are outlined on the curricula or with prior advisor approval. Students who deviate from the curriculum as outlined, or planned with advisors, may be forced to delay graduation.

Further information regarding the Minimum Guidelines are located on our website at:

<https://entomology.tamu.edu/forensic-investigative-sciences/guidelines-for-continuing-students/>

# Honors Programs in Entomology

## Departmental Requirements to Graduate with ENTO Honors

To achieve ENTO Honors, a student must complete 18 hours of Honors coursework:

1. ENTO 201 General Entomology or ENTO 208/209 Veterinary Entomology
2. Twelve (12) hours of honors-level ENTO coursework.
  - a. At least six (6) hours of ENTO courses must be at the 300/400 level.
  - b. Upper level may include 6 hours of Directed Studies / Research.
3. Three (3) additional hours of honors-level coursework.

To be certified for Honors Distinction in Entomology no grade of D\* or F\* in any course on the transcript and no grade on the transcript of “D” or “F” in an honors class can be recorded. (An asterisk [\*] on the transcript of a graduating student indicates that the student was given a grade penalty for academic dishonesty and the student did not complete the remediation program that is required in order to have the asterisk removed from such a student’s transcript.)

## Honors Recognition and Graduation with Honors

All completed Honors coursework taken at Texas A&M University is designated as such on a student’s official transcript, showing that the student has taken part in this enhanced curriculum. After graduation, the transcript will designate that the student has achieved the distinction of “Entomology Honors”, as well as any other University academic distinctions.

## Admission to the Honors Program in Entomology

Current and potential ENTO majors who have an overall GPA of  $\geq 3.5$  are eligible for admission to the Department Honors Program. Students are encouraged to consult with a member of the Departmental Academic Advising Team as early as possible in their academic career to plan their course sequence. A TAMU cumulative 3.5 GPA and a 3.25 GPA in Honors courses is required to graduate with ENTO Honors.

## **Grade Point Requirements**

Participants in the Entomology Honors Program must maintain a TAMU cumulative 3.5 GPA and a 3.25 GPA in Honors courses and no grade in an honors course below a "C".

## **Professional Development**

Students are highly encouraged to pursue additional University-level honors distinctions, certificates, and to participate in programs such as the Research Scholars Program through the Office of Honors and Undergraduate Research. Additional professional activities such as organizational memberships and participation in Student Research Week or other student oral presentation or poster competitions are strongly encouraged.

# **Honors Program in Forensic and Investigative Science**

## **Departmental Requirements to Graduate with FIVS Honors**

To achieve FIVS Honors, a student must complete 18 hours of Honors coursework:

1. FIVS 205 Introductory Forensic & Investigative Sciences
2. Twelve (12) hours of honors-level FIVS coursework.
  - a. At least six (6) hours of FIVS courses must be at the 300/400 level.
  - b. Upper level may include 6 hours of Directed Studies / Research.
3. Three (3) additional hours of honors-level coursework.

To be certified for Honors Distinction in Forensic & Investigative Sciences no grade of D\* or F\* in any course on the transcript and no grade on the transcript of "D" or "F" in an honors class can be recorded. (An asterisk [\*] on the transcript of a graduating student indicates that the student was given a grade penalty for academic dishonesty and the student did not complete the remediation program that is required in order to have the asterisk removed from such a student's transcript.)

## **Honors Recognition and Graduation with Honors**

All completed Honors coursework taken at Texas A&M University is designated as such on a student's official transcript, showing that the student has taken part in this enhanced curriculum. After graduation, the transcript will designate that the student has achieved the distinction of "Forensic & Investigative Sciences Honors", as well as any other University academic distinctions.

## **Admission to the Honors Program in Forensic & Investigative Sciences**

Current and potential FIVS majors who have an overall GPA of  $\geq 3.5$  are eligible for admission to the Department Honors Program. Students are encouraged to consult with a member of the Departmental Academic Advising Team as early as possible in their academic career to plan their course sequence. A TAMU cumulative 3.5 GPA and a 3.25 GPA in Honors courses is required to graduate with FIVS Honors.

## **Grade Point Requirements**

Participants in the Forensic & Investigative Sciences Honors Program must maintain a TAMU cumulative 3.5 GPA and a 3.25 GPA in Honors courses and no grade in an honors course below a "C".

## **Professional Development**

Students are highly encouraged to pursue additional University-level honors distinctions, certificates, and to participate in programs such as the Research Scholars Program through the Office of Honors and Undergraduate Research. Additional professional activities such as organizational memberships and participation in Student Research Week or other student oral presentation or poster competitions are strongly encouraged.

# Minors, Double Major and Certificate

A minor is a great way to customize your studies. A minor consists of a group of specialized courses, totaling between 15 and 18 credit hours.

## Minor in Entomology

The minor in Entomology is available to all students enrolled at Texas A&M University. The courses listed below constitute the minimum **15** hours required for a minor in Entomology.

### A. Core Courses (8-9 hours):

1. ENTO 201 General Entomology  
**OR**  
ENTO 208/209 Veterinary Entomology & Lab
2. ENTO 301 Biodiversity and Biology of Insects  
**OR**  
ENTO 322 Insects in Human Society

**(NOTE: Substitutions are not allowed for core courses.)**

### B. Directed Elective Courses (9 hours):

Nine additional hours in 300 or 400 level ENTO courses are required. Students are encouraged to visit the Department of Entomology Academic Advisors in 404 Minnie Belle Heep Building (HPCT), West Campus, to select the appropriate directed elective courses based on their individual educational and career interests.

### C. Prerequisite Courses:

All prerequisites for each core and elective course also must be met. Prerequisite courses will not be applied to the minor requirements and do not count toward the number of hours needed to complete the minor. Please refer to the Texas A&M University Undergraduate Catalog for a listing of course prerequisites.

**A GRADE OF 'C' OR BETTER IN EACH COURSE USED FOR THE MINOR IS REQUIRED.**

## Other Common Minors

If you find a minor that interests you, check the department's website for any prerequisites, then contact an advisor in that department. This is a list of common minors and possible double majors/degrees obtained in the College of Agriculture and Life Sciences.

Agribusiness Entrepreneurship  
Agricultural Economics  
Agricultural Leadership, Education and Communications  
Biochemistry and Biophysics  
Biological and Agricultural Engineering  
Ecology and Conservation Biology  
Extension Education  
Horticultural Sciences  
International Development  
Nutrition and Food Science  
Plant Pathology and Microbiology  
Poultry Science  
Recreation, Park and Tourism Sciences  
Soil and Crop Sciences  
Business (Minor through the Mays Business School)

There are several other minors that students pursue outside of the college such as: Chemistry, Biology, Psychology, Sociology, and Public Health to name a few.



**AGRICULTURE & LIFE SCIENCES**

# Double Major in Entomology

The double major in Entomology is available to all students enrolled at Texas A&M University. The courses listed below constitute the minimum **20** hours required for a double major in Entomology.

**A. Core Courses (8-9 hours):**

1. ENTO 201 General Entomology

**OR**

ENTO 208/209 Veterinary Entomology & Lab

2. ENTO 482 Occupational and Professional Development

3. ENTO 301 Biodiversity and Biology of Insects

**OR**

ENTO 322 Insects in Human Society

**(NOTE: Substitutions are not allowed for core courses.)**

**B. Directed Elective Courses (12 hours):**

Twelve additional hours in 300 or 400 level ENTO courses are required. Students are encouraged to visit the Department of Entomology Academic Advisors in 404 Minnie Belle Heep Building (HPCT), West Campus, to select the appropriate directed elective courses based on their individual educational and career interests.

**C. Prerequisite Courses:**

All prerequisites for each core and elective course also must be met. Prerequisite courses will not be applied to the minor requirements and do not count toward the number of hours needed to complete the double major. Please refer to the Texas A&M University Undergraduate Catalog for a listing of course prerequisites.

**A CUMMULATIVE GPA OF A 2.0 OR BETTER FOR THE DOUBLE MAJOR IS REQUIRED**

# Certificate in Public Health Entomology

A certificate program can also help you obtain specialization in an academic area. Similar to a minor, a certificate requires taking a group of related courses. Our advisors can help you decide if a certificate program would benefit you.

Students thinking of going to professional school in one of the following fields may consider obtaining the Certificate in Public Health Entomology:

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>▪ Public Health Field</li> <li>▪ Medical School</li> <li>▪ Nursing School</li> <li>▪ Veterinary School</li> </ul> | <ul style="list-style-type: none"> <li>▪ Professional School (Dental, Pharmacy, PT)</li> <li>▪ Law School</li> <li>▪ Graduate School</li> </ul> |
|--|---|

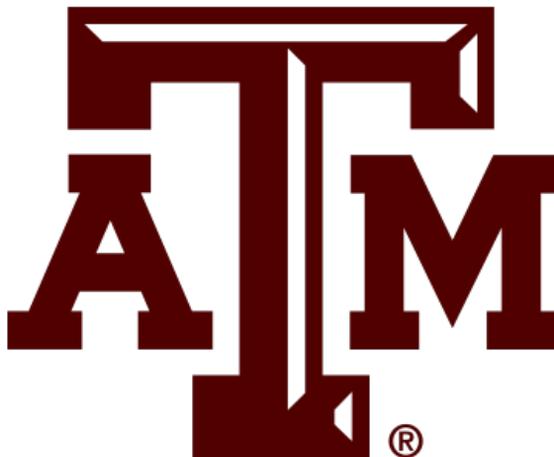
## ELIGIBILITY TO APPLY:

1. Completion of a minimum of one (1) Course from Category I **and** II with a grade of “B” or better and a cumulative TAMU GPA of 2.0+
2. Students must complete and submit application before completion of 75 credit hours.

<p><b>Category I</b> – Select <b>one</b> of the 3 credit hour courses</p> <ul style="list-style-type: none"> <li>• ENTO 210 – Global Public Health Entomology (FALL/SPRING)</li> <li>• BESC 314 – Pathogens, the Environment &amp; Society</li> <li>• VTPB 221 – Great Diseases of the World</li> </ul>	<p><b>Category III</b> -- Select <b>one</b> of the 3 credit hour courses</p> <ul style="list-style-type: none"> <li>• ENTO 403 –Urban Entomology (SPRING)</li> <li>• HLTH 354 –Medical Terminology for Health Professions</li> <li>• VIBS 204 – Food Toxicology &amp; Safety</li> <li>• VIBS 413 – Introduction to Epidemiology</li> <li>• VIBS 432 – Public Health Practices <b>OR</b> PHLT 302 Foundations of Public Health</li> <li>• VTPB 301/WFSC 327-- Wildlife Diseases</li> <li>• VTPB 409 – Introduction to Immunology</li> </ul>
<p><b>Category II</b> – Must complete <b>both</b> courses</p> <ul style="list-style-type: none"> <li>• ENTO 208/209 – Veterinary Entomology (FALL/SPRING)</li> <li>• ENTO 423 – Medical Entomology (FALL/SPRING)</li> </ul>	<p><b>Category IV</b> – Required Capstone Course*</p> <ul style="list-style-type: none"> <li>• ENTO 425 – Disease Ecology (SPRING)</li> <li>• ENTO 426 – Field Techniques (EVERY OTHER SPRING)</li> </ul>

**To Complete the Certification, Students Must:**

- Successfully complete courses in Category I-III **PRIOR** to enrollment in Category IV Course\*
- Complete all courses within the certification with a minimum grade of "C"
- Earn a cumulative 3.0+ GPA within the certificate courses
- Complete exit survey
- Meet the minimum qualifications for graduation as defined by Texas A&M University including a 2.0 cumulative GPA



## High Impact Opportunities

High-impact learning happens when students are actively engaged in the educational process, when their learning goes beyond the classroom to be applied in their personal and work lives. High-impact learning immerses you in hands-on experiences, the ability to work closely with diverse individuals along with classwork. Students engaged in high-impact learning often see improvement in grade point averages and are more engaged in their education.

High-impact Opportunities include:

- Study Abroad
- Internships
- Undergraduate Research
- Field Trips
- Learning Communities
- Collaborative Projects
- Diversity/Global Learning
- Honors Programs

The Department of Entomology has its own faculty-led study abroad programs, which students can participate and learn about new cultures and environments related to the field of entomology. We have many diverse internships that are presented to the students throughout the year along with abundant support from our faculty to engage students in undergraduate research.

# Entomology Career Opportunities

## Medical-Veterinary

- Centers for Disease Control
- U.S. Public Health Service
- Medical Service Corps, U.S. Armed Forces
- Mosquito Control Districts
- Supply Companies
- Animal Health Companies / Pharmaceuticals

## Urban-Landscape

- General Pest Management (Arthropods, Rodents & Birds)
- Lawn and Ornamental Pest Mgmt.
- Termite Pest Management
- Fumigation and Wood Preservation
- Forensic Structural Entomology
- Residential Pest Control Companies
- Commercial Pest Control Companies
  - Warehousing and Production
  - Hospitals, Nursing Facilities, Restaurants
- Consulting Companies
- Continuing Education and Training

## Regulatory

- USDA, APHIS
- Homeland Security
- EPA
- FDA
- Food Quality Assurance
- Legal

## Crop Protection

- Agro-Chemical / Pharmaceutical Companies
- Seed Companies
- Research and Development
- Sales and Marketing
- Agricultural Consulting Services

## Conservation/Biodiversity

- Federal and State Agencies
- Private Foundations
- Museums – Institutions

## Educating Our Youth

- K-12 Classrooms
- Texas Cooperative Extension
- Higher Education

## International Policy

## Forensic & Investigative Sciences Career Opportunities

There is no single path that guarantees a career in forensic science. Competitive candidates must demonstrate the knowledge, skills, and abilities that are important to the field. Forensic scientists must be able to **apply scientific principles** to civil or criminal cases and **communicate** effectively in the courtroom.

Forensic scientists work in crime laboratories and medical examiner's laboratories where they handle, analyze, and interpret scientific findings.

Some of the types of Forensic Scientists Disciplines include:

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>– Anthropology</li><li>– Criminalistics</li><li>– Digital &amp; Multimedia Sciences</li><li>– Engineering Sciences</li><li>– Forensic Entomology</li><li>– Jurisprudence</li></ul> | <ul style="list-style-type: none"><li>– Odontology</li><li>– Pathology/Biology</li><li>– Psychiatry &amp; Behavioral Science</li><li>– Questioned Documents</li><li>– Toxicology</li></ul> |
|--|--|

Forensic scientists work in laboratories, at crime scenes, in offices, in classrooms, and in morgues. Their responsibilities may include field work – domestically or abroad, in various locales and in varying climates. They may work for federal, state, and local governments; international organizations; public and private laboratories; medical examiners offices; hospitals; universities; police departments; or as independent forensic science consultants.

# Texas Forensic Science Commission

## Forensic Analyst Licensing

During the 84th Legislative Session, the Texas Legislature passed SB-1287, which required all forensic analysts to be licensed beginning January 1, 2019. See Tex. S.B. 1287, 84th Leg., R.S. (2015). The term "forensic analyst" means any person who on behalf of a crime laboratory accredited under this article technically reviews or performs a forensic analysis or draws conclusions from or interprets a forensic analysis for a court or crime laboratory.

Pursuant to its legislative mandate, the Commission established qualifications and adopted administrative rules with regard to forensic analyst licensing that are published in Tex. Admin. Code Chapter 651, Subchapter C. Requirements for forensic analyst and/or technicians to become licensed include:

- Minimum Education requirements: **The FIVS-SCE meets this requirement**
- Specific coursework requirements: **The FIVS-SCE meets this requirement**
- Successful completion of a General Forensic Analyst or Technician Licensing Exam; and
- Proficiency testing requirements.

<https://www.txcourts.gov/fsc/licensing/>

If you plan on working in another state, you will need to contact the appropriate Licensing agency in the state you intend to work.



## Advanced Degrees

The Master of Science and Doctor of Philosophy degrees in Entomology are offered with academic education and research training appropriate to thesis and dissertation projects addressing a wide array of subject matter areas. The Department of Entomology strives to produce graduates with the relevant education and skills necessary to advance knowledge and provide solutions to the multifaceted problems involving insects in society and the environment. Through coursework, research, and hands-on experience, the Department offers an integrated entomology curriculum that spans core life science knowledge while including specialized training in topics unique to insects and their relatives.

### Preparation for Medical & Veterinary School

#### **BACHELOR OF SCIENCE IN ENTOMOLOGY**

Meets all Medical School Requirements

Meets all but 2 Veterinary School Requirements

Required Courses that meet Medical and Veterinary School Requirements:

- 2 semesters of English
- 1 semester of Technical Writing
- 2 semesters of Introductory Biology with lab
- 2 semesters of Inorganic Chemistry with lab

Technical Electives that meet Medical and Veterinary School Requirements:

- 1 semester of Statistics
- 2 semesters of Organic Chemistry with lab
- 2 semesters of Physics with lab
- 2 semesters of upper-level Biology
- 1 semester of Biochemistry
- 1 semester of Genetics
- 1 semester of General Microbiology with lab
- 1 semester of Animal Nutrition or Feeds & Feeding
- 1 semester of Communication

**BACHELOR OF SCIENCE IN FORENSIC AND  
INVESTIGATIVE SCIENCES – SCIENCE EMPHASIS**

Meets all Medical School Requirements

Meets all but 3 Veterinary School Requirements

Required Courses that meet Medical and Veterinary School Requirements:

- 2 semesters of English
- 2 semesters of Introductory Biology with lab
- 2 semesters of Inorganic Chemistry with lab
- 2 semesters of Organic Chemistry with lab
- 2 semesters of Physics with lab
- 1 semester of Biochemistry
- 1 semester of Genetics
- 1 semester of Statistics

Directed Electives that meet Medical and Veterinary School Requirements:

- 2 semesters of upper-level Biology
- 1 semester of General Microbiology with lab

**Professional School Programs**

- Medical School
- Veterinary Medicine
- Dental School
- Pharmacy School
- Physical Therapy School
- Allied Health
- Nursing School
- Law School

# **Student Organizations**

## **Undergraduate Entomology Student Organization (UESO)**

The mission of the UESO is to further the knowledge of matters concerning entomology. UESO is open to all Texas A&M undergraduates who are interested in entomology, regardless of their major. UESO fosters the interests of the undergraduate students to promote and support academic and social activities of interest to undergraduate students, and serve as liaison between the faculty and staff of the Department of Entomology and other related organizations, and the graduate students.

## **Aggie Forensic and Investigative Sciences Organization (AFIS)**

This Aggie Forensic and Investigative Sciences Organization provides hands on experiences in an effort to create a better understanding of Forensic Science and all fields that apply to it. AFIS is a student-run organization established to spread knowledge to the community and all those with an interest in Forensic Science and is open to both graduates and undergraduates at Texas A&M University. AFIS hosts guest speakers with various forensic science experience. Past speakers include Crime Scene Investigators, Forensic Entomologists, Forensic Toxicologists, NCIS agents, FBI agents, Narcotics Investigators, Latent Print Examiners, Soil Scientists, Firearms and Toolmark Analysts, former CIA Agents, Arson Investigators, Forensic Anthropologists, and many others. Members also participate in many campus events such as The Big Event, Relay for Life, Aggieland Saturday, MSC Open House, and Science Night at local schools.

## **Department of Entomology Scholars Society**

The Department of Entomology Scholars Society is an organization developed to help students expand their skills in leadership and outreach through the enhancement of undergraduate activities and functions. Scholars provide valuable feedback through their roles as liaisons between faculty, staff, students, and prospective students. Each Scholar participates in undergraduate activities as representatives of the Department as a

whole; serving as hosts to prospective students, their parents, and other campus visitors.

### **COALS Council**

The College of Agriculture and Life Sciences Student Council is a professional organization that serves as a liaison between students, faculty, and the Dean in the College of Agriculture and Life Sciences. COALS council represents the nearly 8,000 students within the college through service activities, networking opportunities, professional development, and opportunities for funding through scholarships and grants.

### **Freshman Leadership Experience (FLE)**

Freshman Leadership Experience (FLE) is a Freshman Leadership Organization (FLO) exclusively for freshmen in the College of Agriculture and Life Sciences. The organization was founded in 2008 with the goals to enhance the leadership skills of freshmen, build professional skills, and emphasize the importance of selfless service. This allows the freshman to network with each other in the organization and throughout the college.

### **Gamma Sigma Delta**

Gamma Sigma Delta is an honor society dedicated to recognizing your academic achievements and/or accomplishments as a student, faculty member, alumnus, or industry and university supporter. Student election to the Society is more than an honor. It is a challenge and an obligation to contribute to the understanding and furthering of agriculture and related sciences which are expanded to include, but are not limited to, forestry, natural resources, statistics, human ecology, and veterinary medicine.

The purposes of Gamma Sigma Delta are to promote and to recognize the achievements of individuals who excel. Membership in Gamma Sigma Delta is often recognized by recruiters, colleagues, and foreign and domestic governments as an indicator of exceptional academic and/or professional performance.

For listing of all student organizations please visit the Student Life website:

<http://www.tamu.edu/student-life>

# Texas A&M University Common Contact Information

## Admissions

- Phone: 979-845-1060
- Email: [admissions@tamu.edu](mailto:admissions@tamu.edu)

## Scholarships & Financial Aid

- Phone: 979-845-3982 (Scholarships)
- Email: [scholarships@tamu.edu](mailto:scholarships@tamu.edu)
- Phone: 979-845-3236 (Financial Aid)
- Email: [financialaid@tamu.edu](mailto:financialaid@tamu.edu)

## Prospective Student Center

- Phone: 979-458-0950
- <http://admissions.tamu.edu/psc>

## Transportation Services

- Phone: 979-862-7275
- <http://transport.tamu.edu>

## Housing

- Residence Life
- <http://reslife.tamu.edu>

## Disability Services

- Phone: 979-845-1637
- <http://disability.tamu.edu>

## Student Business Services

- Phone: 979-847-3337
- <http://sbs.tamu.edu>

For general information, please visit [www.tamu.edu](http://www.tamu.edu).



TEXAS A&M UNIVERSITY  
Entomology



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