



# AGGIE

# CSI

Degree In Investigative Sciences  
Teaches Skills For Any Career

By Stephanie Jeter '06



The professor's West Campus office is just a short drive from main campus. The university bus stops right outside the main door. But beyond the concrete steps is a method of teaching that makes Texas A&M different from any other school in the state.

**Dr. Jeff Tomberlin listens to corpses.**

Leaning back in his office chair, feet crossed at the ankles and hands interlocked behind his head, the assistant professor in forensic entomology explained the statement so casually, he almost made the profession seem common.

Crime scenes talk, he said, and now for the first time, a university in Texas is teaching students to listen.

He's part of Texas A&M's new forensic and investigative sciences degree plan under the College of Agriculture and Life Sciences. Since the program's first official day in fall 2007, Tomberlin has invited a group of undergraduates to join him behind the police tape.

As a forensic entomologist, Tomberlin uses his expertise in examining insects as clues. Unlike other investigators on scene, Tomberlin gets inside a killer's head by taking notice of insects taking residence on the victim's body.

Though students don't work on Tomberlin's real cases, are never exposed to human bodies, and spend most of their allotted hours in the classroom, they have hands-on opportunities not offered anywhere else in the state. The goal, he said, is to teach undergraduates the process of investigation.

Leslie Gunn '08 said she has been interested in forensics since high

school. Before discovering forensic and investigative sciences, she had been working toward that goal by studying politics. "My main interest was the crossover between forensic anthropology and archeology. It's very interesting to see that overlap."

Exactly, said Tomberlin. When discussing all that the major offers, he said it's the program's versatility that deserves attention. "I like to say we prepare students to enter all fields ... from the courtroom to boardroom," he said. FIVS teaches skills that can be used in any career field.

Then, sometimes, class is taught in a field. Like once, Gunn remembered, Tomberlin came to lecture toting a dead hog. Maggots had already taken up residence in the hog's arms, rear and mouth. Class was held outside that day.

"The biggest complaint by far was the smell," she said. But it was important to experience, Tomberlin as-

sured. Body temperatures rise when insects are present. Without knowing that fact, an investigator can't accurately estimate time of death. Chapter one—Insects on a body can say a lot, especially if you're looking for the answer. Extra credit was given to students who registered the temperature difference by touch. There were few takers.

Tracy Ivie '09, an agricultural communications and journalism major from Huntsville, started college late, she said. Before she ever enrolled in her first university course, Ivie had already completed a short career in law enforcement dispatch. She had it in her mind to get college hours, attend police academy, and go back to the career on which she had first cut her teeth. FIVS was a near perfect fit.

"I've read autopsy reports. I've taken the calls," she said, but had never been part of the investiga-

**A&M's Forensic And Investigative Sciences Classes Include:**

- Introduction to Forensic and Investigative Sciences
- Biotechnology and Forensics
- Practice and Principles of Science and Law
- The Science of Forensic Entomology



When Tomberlin brought a dead hog to class for a visual in forensic entomology, insects had already burrowed in parts of the skin. In fact, that was the point. Noticing insects on a body and determining their stage or type can answer a lot of questions, such as where or how long ago a subject died. Insects can even help explain the cause of death.

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A degree in investigative sciences is saturated in science. From DNA to ballistics, insect life cycles to blood splatter, students learn that facts dictate results.



tion. The first class offered was an introductory course with a syllabus full of buzz words: ballistics, DNA analysis, blunt force trauma, arterial spray, forensic anthropology and Tomberlin's own specialty, forensic entomology.

"I learned a lot more than I was expecting," said Charles Delashmit '08, an undergraduate from St. Louis. For a class on blood splatter, students were issued a spray bottle of sorts filled with imitation blood, he said. By controlling the spray bottle, students could see what the blood pattern would look like if the victim were hit with high velocity or low velocity, even if the blow came from above or below. They learned to recognize by patterns whether the victim had been sitting, standing or kneeling.

Students learned about firearms and weapons' details to know how a gun discharges and how a bullet tears through a body. They learned about structural issues and terrorist attacks.

"It was a class in perception," Delashmit said.

Ivie called the class's text an informational crime drama. "I remember there was one chapter on how serial killers think, looking at their MOs and how it develops," she said. "Then we used it in a murder situation to see how the information related or how it didn't."

And when Tomberlin demonstrated blunt force trauma by smashing pumpkins with a crowbar, sledge hammer and other instruments of force, the answer lay in the seedy, left-over pumpkin pulp. True, it's not what would be left at a real crime scene, but "they're securing real results," Tomberlin said. "I want to help them cultivate ideas—scientific thinking.

"This pushes the boundaries of what Texas A&M University represents... how we can adapt to new challenges." 🍂

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**ABOVE:** Blood stains mean very little if investigators can't read them. Students were given squirt bottles of imitation blood to measure, track and decipher blood patterns.

**BELOW:** A pattern can indicate where the victim was standing, sitting or kneeling. Patterns can show if the blow came from above or below, and even identify a weapon type.