

**New Program Planning Summary**

**CLEMSON UNIVERSITY  
REQUESTING TO OFFER A NEW PROGRAM**

**Bachelor of Science**

**in**

Forensic Science

**Submitted to the South Carolina Commission on Higher Education**

College of Agriculture, Forestry and Life Science  
Department of Biological Sciences  
Clemson University

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**Proposal designation:**

New degree program for a Bachelor of Science in Forensic Science; 120-122 semester credit hours required.

**Proposed date of implementation:**

Fall semester 2007.

**Justification of need for the proposed program:**

Forensic science is an interdisciplinary field that involves three broad areas of expertise: (1) Forensic investigation, which is the management and processing of crime scenes, including the collection and preservation of evidence; (2) Forensic analysis of collected evidence, which includes both biological and chemical techniques; (3) Legal aspects of forensics, which includes proper handling and the presentation of evidence as well as understanding criminal behavior and the legal system. All of these areas are becoming increasingly sophisticated and require not only thorough training in basic natural and social science but specific training in the specialized areas used in the field.

Forensic scientists investigate crimes by collecting and analyzing physical evidence. Often, they specialize in areas such as DNA analysis or firearm examination, performing tests on weapons or on substances such as fiber, glass, hair, tissue, and body fluids to determine their significance to the investigation. Proper collection and storage methods are important to protect the evidence. Forensic scientists also prepare reports to document their findings and the laboratory techniques used, and they may provide information and expert opinion to investigators. When criminal cases come to trial, forensic scientists often give testimony, as expert witnesses, on specific laboratory findings by identifying and classifying substances, materials, and other evidence collected at the scene of a crime. Some forensic scientists work closely with other experts or technicians. For example, a forensic scientist may consult either a medical expert about the exact time and cause of death or a technician who specializes in DNA typing in hopes of matching a DNA type to a suspect.

A trained forensic scientist can expect to find employment in police departments, sheriffs', district attorneys' and medical examiners' offices, regional and state agencies, the Drug Enforcement Administration, the FBI, CIA, the United States Postal Service, the Secret Service, the military forces, the US Fish and Wildlife Service, and private companies. The U.S. Bureau of Labor has estimated that in the next decade there will be 10,000 jobs in the field available across the country.

In response to this demand, there are now over 100 associate and bachelors programs in the United States. The American Academy of Forensic Sciences, the top peer professional organization accrediting these programs, has accredited only 11 of these programs. The nearest accredited program is at Eastern Kentucky University (approx. 325 miles from Clemson). There are no accredited programs in the adjacent states of Georgia, North Carolina or Tennessee and only 1 non-accredited program is located in North Carolina (Fayetteville State University). The goal for the program proposed by Clemson University is full accreditation by the American Academy of Forensic Sciences.

Studies by peer institutions in which prospective or new undergraduate students have been polled, show that as many as one-third would choose a major in forensic science and approximately another one-fourth would choose a science major which would allow them to have a career in forensics. Much of this interest has been stimulated by the media, but in fact, careers in forensics are interesting and rewarding.

### **Anticipated program demand and productivity**

Based on the proliferation of forensic programs in the United States, the results of polls of prospective students by peer institutions and the numerous inquiries we receive annually as to the availability of such a program, it is fully expected that there will be far greater demand for the major than we would anticipate accommodating. The target enrollment in the program is 100 full-time students in five years.

### **The extent to which the proposed program duplicates existing programs in the state**

Currently no institutions in South Carolina offer a BS in Forensic Science or related degrees. Greenville Technical College offers a certificate program in forensics, which is targeted to law enforcement officials.

### **Relationship of the proposed program to existing programs at the proposing institution**

Forensic Science is an interdisciplinary field that requires a strong foundation in basic natural and social sciences. Students will be required to take courses in mathematics, physics, biology, genetics, sociology, and chemistry. This degree program will then help populate these courses with highly motivated students. Assuming that Clemson University maintains a fixed enrollment policy, the students that choose this major will most likely come from those who would enroll in the degree programs in the Departments of Biological Sciences and to a lesser extent a variety of other departments such as Genetics and Biochemistry, Chemistry, and Sociology. Biological Sciences currently has approximately 750 majors in its degree programs. It is considered a benefit to those students to have a specialized career-oriented degree option. Because of the content emphasis of the program, the Departments of Biological Sciences, Chemistry, and Sociology will cooperate in managing the program and providing advisors to students in the program. The home department for administrative purposes will be Biological Sciences.

As the program grows, opportunities will become available to offer specialized training in areas such as automotive investigative forensics (potentially to involve ICAR), and wildlife forensics in conjunction with wildlife biology programs, among many others.

### **Relationship of the proposed program to other institutions via inter-institutional cooperation**

The program is designed to be significantly inter-institutional for two reasons: (1) To avoid duplication of resources and personnel; (2) To provide an international experience for the enrolled students. Two institutions, Greenville Technical College (GTC), Greenville, SC and the University of Central Lancashire (UCLAN), Preston, England will be significant and essential participants in the degree program.

Because GTC's current certificate program is designed primarily for law enforcement officials their faculty has training in crime scene evaluation and analysis of evidence as well as training in the presentation of evidence. In addition, they have developed an infrastructure to support their program, which includes the location of the Greenville County police forensics labs. This new BS program will rely on these faculty and infrastructure to teach Clemson courses in some of the fundamentals of forensics during the first three years. In addition, an internship at GTC will be required after the junior year. Finally, the curriculum will be designed such that students enrolling at GTC can meet all the requirements for transferring into the BS degree after their freshman year.

The Department of Forensic and Investigative Science at UCLAN has a well developed baccalaureate level degrees with approximately 800 majors. In addition, they have 15 faculty and staff dedicated to the teaching of forensics, numerous laboratories dedicated to forensic analysis and other infrastructure including three crime scene houses. The degree program would include a full year of study abroad at UCLAN, during which time students would take advanced and specialized forensics courses. In order to help prepare them for this year and to be certain that they have some of the same preparation as the UCLAN students, they will have a required 5 week summer preparatory class at UCLAN after their sophomore year which covers the three basic areas of forensics mentioned above.

During the past 12 months a unique partnership between Clemson University and UCLAN has developed based upon faculty involvement that was initiated several years ago in joint supervision of research projects and student mentorship. As the result of this interaction, we now begin to continue this proven and effective partnership to include a new academic program. Enrolled Clemson students in this forensic science degree program will be required to engage in a study abroad experience

In addition to the academic experience, these study abroad programs are in keeping with Clemson University's goal of increasing the number of student's with an international education. During the spring of 2006, 5 students from Clemson successfully completed the 5 week Foundation Module at UCLAN on a U.S. Department of Education (FIPSE) grant. The full year would be part of an exchange program with UCLAN, thus students from Clemson would pay Clemson tuition. An outline of the overall program would be:

1. Freshman year-at CU or GTC
2. Sophomore year-advanced courses at CU/GTC
3. Summer after sophomore year-5 week module at UCLAN
4. Junior year-advanced courses at CU/GTC
5. Summer after junior year-internship at GTC
6. Senior year-advanced forensics courses at UCLAN

#### **Total new costs associated with implementing the program**

Initially there would be minimal costs associated with the program, as the plan is to use existing basic science, sociology and general education courses at CU and to develop appropriate courses in forensics with existing faculty at CU and GTC. The students who study at UCLAN will be part of an exchange program allowing us access to UCLAN faculty. In the early stages, it is anticipated that the study abroad programs will be underwritten by a grant through the European Union-United States Atlantis Program from the U.S. Dept. of Education. A proposal to do so has been submitted recently and is currently under review. Other grant opportunities to seek external funding to support this initiative will be investigated thoroughly.

By year 2-3 of the program it is anticipated that at least one additional faculty member will be needed to teach supplement basic forensics courses (\$90,000 plus fringe), an administrative assistant will be needed to coordinate the program (\$40,000 plus fringe) and funds will be required for selective laboratory materials and equipment (\$200,000) for a **total of \$130,000 recurring and \$200,000 one time expenses.**