

FORENSIC SCIENCES

Forensic Sciences Graduate Certificate

The forensic sciences graduate certificate program complements a program of study at Iowa State University that leads to any graduate degree in an established academic major. The forensic sciences certificate is also recommended for students who wish to strengthen their interdisciplinary skills. Coursework for the certificate is at the graduate level, however qualified undergraduates may also enroll by admission to the Graduate College as a certificate student for a minimum of one semester. Completion of the certificate is noted on the student's transcript and via a certificate provided by the Registrar.

Learning Outcomes

Upon completion of the graduate certificate in forensic sciences, students will be:

- Educated in a diverse array of topics that contribute to the interdisciplinary field of forensic science.
- Well informed about the needs for research and development in forensic science.
- Able to propose a research project related to forensic science.
- Informed about forensic science as a career choice.
- Aware of the possibility of offering expertise to law enforcement agencies within the community.
- Aware that forensic sciences can be used as an educational tool in post-graduate capacity as a professor/teacher, parent, or community volunteer.

Requirements

- 12 credits of coursework and seminars at Iowa State University with a total GPA of 3.0 or higher.
- Attendance at all events hosted by the NIST Center for Excellence in Statistics and Applications in Forensic Evidence (CSAFE) at Iowa State.
- Attendance at a national or regional scientific meeting devoted to forensic science.
- Completion of the certificate within three contiguous calendar years.

Coursework

- 1 graduate credit seminar course in forensic science: **ANTHR 541**. This seminar will be offered each fall semester. In this seminar, you will report on the off-campus conference you attend, and also on your research.
- 1 graduate credit of independent study: **ANTHR 542**. You will choose a topic in forensics, ask the Director of Certificate Studies (DOCS) for

approval, research it in the literature and write a paper on it. You will present this research project to the seminar group.

- At least 10 graduate credits from among the courses listed in the Certificate Electives course list. From this list, you may not choose any courses offered toward your academic major, and you must choose courses from at least two different departments entirely outside of your department or program. No credits may be transferred to ISU from other institutions.

All Certificate candidates are required to take ANTHR 541 (1 credit) and ANTHR 542 (1 credit). In addition, choose 10 credits from the following list of Certificate Electives:

AGRON 502	Chemistry, Physics, and Biology of Soils	3
AGRON 555	Environmental Soil Mineralogy	3
AN S 561	Population and Quantitative Genetics for Breeding	4
AGRON 563	Soil Formation and Landscape Relationships	3
ANTHR 503	Biological Anthropology and Archaeology	3
ANTHR 519	Skeletal Biology	3
ANTHR 524	Forensic Anthropology	3
B M S 554	General Pharmacology	3
CHEM 511	Advanced Analytical Chemistry	3
CHEM 513	Analytical Molecular and Atomic Spectroscopy	3
CHEM 516	Analytical Separations	3
CHEM 572	Spectrometric Identification of Organic Compounds	3
CHEM 577	Mass Spectrometry	3
CPR E 536	Computer and Network Forensics	3
ENT 675	Insecticide Toxicology	3
GEN 409	Molecular Genetics	3
GEN 462	Evolutionary Genetics	3
GDCB 511	Advanced Molecular Genetics	3
MATH 535	Steganography and Digital Image Forensics	3
M S E 550	Nondestructive Evaluation	4
M S E 551	Characterization Methods in Materials Science	3
M S E 552	Scanning and Auger Electron Microscopy	3
SOC 584	Current Issues in Crime and Justice	3
STAT 587	Statistical Methods for Research Workers	4
TOX 546	Clinical and Diagnostic Toxicology	1-3
V MPM 528	Principles of Epidemiology and Population Health	3
V MPM 586	Medical Bacteriology	4
V MPM 542	Introduction to Molecular Biology Techniques	1