

FORENSIC SCIENCES CERTIFICATE

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:

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| 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 |