



Eastern Kentucky University is a nationally recognized public university located in Richmond, Kentucky. EKU began offering online degrees in 2006 and continues to service students with both on-campus and online offerings.

Fire Science

Bachelor of Science in

Fire, Arson & Explosion Investigation

EKU's comprehensive fire, arson and explosion investigation degree is one of only a handful of specialized programs in the nation. This unique program provides students with the scientific and investigative skills needed to determine the cause and criminal nature of fires and explosions.

The EKU Online program includes unique, hands-on fire, arson and explosion investigation experiences on Eastern Kentucky University's Richmond, Kentucky campus. Students will be on-campus for one week during two consecutive summer sessions for this residency. View [summer session and residency requirements here](#).



ONLINE



\$443 PER
CREDIT HOUR

OTHER FIRE SCIENCE DEGREES & CERTIFICATES

- [BS Fire Protection & Safety Engineering Technology](#)
- [BS Fire Protection Administration](#)
- [Certificate in Industrial Fire Protection](#)

BENEFITS

- Accelerated 8-week terms
- Free textbooks for all students with [EKU BookSmart](#)
- IFSAC-accredited programs
- Nationally renowned instructors comprised of former fire chiefs, fire marshals, engineers and investigators, prominent for their professional achievements and success in the field
- Courses begin 6 times per year
- Generous credit transfer policy
- [Reduced tuition for active duty military members and their spouses](#)
- Personal advisors stay with you from application to graduation
- Free online tutoring and career services assistance
- Dynamic, supportive learning environment
- Ranked by *U.S. News & World Report* among the best universities offering online degrees

521 Lancaster Ave.
Richmond, KY 40475

859-622-4455 | onlinedegrees@eku.edu



[EKU Online Fire, Arson & Explosion Investigation](#)

CORE COURSES

Fire Prevention - FSE 101

An introduction to fire and safety related codes; fire prevention methods; mechanical systems; and engineering solutions for hazards. An in-depth look at the Life Safety Code, the function and testing of fire related building components.

Fire Behavior and Combustion - FSE 120

Introduction to the chemistry and dynamics of fire; including basic terminology and concepts that are applied to the physical and chemical properties of the development and spread of fire in a structure; hazardous materials and the Computer Fire Analysis.

Building Construction - FSE 201

A review of the analysis of building construction methods and terminology. A systems approach to designing building fire safety; the Life Safety Code; the function of and testing of rated building components, evaluating plans for codes compliance.

Fire Detection and Protection Systems - FSE 221

Introduction to fire detection, protection, control systems and extinguishment. Fixed and portable systems of the following types will be studied: automatic sprinklers, standpipes, dry chemical, foam, halogenated agents, fire alarm systems and diction.

Fire and Emergency Scene Operation - FSE 223

Principles of incident management including emergency scene decisions strategies and tactics. Utilizing emergency control resources such as personnel, apparatus and equipment.

Introduction to Explosion Investigation and Bombings - FSE 250

Introduction to explosion investigations and bombings. Topics include a historical overview of terrorism statutes, sources of information, the federal role in explosion investigation, explosives and improvised explosive devices.

Proving Criminal Acts - FSE 260

A study of crimes and the methodical steps in the investigation and proving of criminal acts. Explore defenses/legal remedies to enable the student to understand the obligations of managing an investigation.

Constitutional Criminal Procedure - FSE 280

Examines the legal implications of obtaining evidence directly from the suspect. Fourth, Fifth and Sixth amendments, and rules of evidence are discussed as they relate to the investigation of criminal acts.

Hazardous Materials - FSE 305

Study of hazardous material problems in transportation, storage and use. Chemical properties relating to specific reactions, engineering controls and control in an emergency situation. Emphasis on the role of pre-emergency planning, combating, coordinating and controlling of hazardous materials incident.

Principles of Criminal Investigation - FSE 330

A detailed study of the investigative procedure as it applies to fire, arson, explosion and other personal property crimes.

Applied Learning in Fire and Safety - FSE 349

Work in placements related to academic studies.

Fire Arson and Explosion Investigation - FSE 350

An in-depth study in the analysis of fire, arson and explosion scenes. Emphasis will be placed on the principles and techniques of scene preservation and analysis, management of investigative functions, documentation of the scene and determination of the cause and origin of fire.

Fire Dynamics - FSE 355

An introduction to the fire-related measurement techniques, advanced fire and combustion concepts and associated terminology. This course includes basic numerical methods for understanding fire dynamics.

CORE COURSES CONTINUED

Electrical and Mechanical Systems Failure Analysis - FSE 370

Overview of design criteria for electrical and mechanical systems and components relative to fire safety via laboratory experiments, exemplar components and photographs that depict system and component failures that result in fire. Learning opportunities include engaging in destructive and nondestructive analysis of components and systems.

Failure Analysis - FSE 380

An in-depth study of fire and arson investigations. Emphasis will be placed on the principles and techniques of scene preservation, failure analysis, report writing and determination of cause and origin.

Advanced Explosion and Bombing Investigation - FSE 450

An in-depth study of explosion scene investigation. Emphasis will be placed on the principles and techniques of scene preservation analysis, management of investigative functions, documentation of scene, and determination of the cause of explosions.

Fire Arson and Explosion Case Preparation - FSE 495

Preparation of the fire and arson case for trial, including preparation of demonstrative evidence, scene documentation for presentation, rules of evidence, case review and analysis, and testimony.

Fire Investigation Case Preparation - FSE 496

Preparation of the fire and arson case for trial, including preparation of demonstrative evidence, scene documentation for presentation and testimony.

Practicum - FSE 499

Supervised field observation, research and/or experience.

SUPPORTING COURSE REQUIREMENTS

Introductory Chemistry I/Introductory Chemistry Lab I - CHE 101/101L

Basic principles of structure and properties of matter, chemical nomenclature and reactivity. Relates chemistry concepts to everyday life phenomena.

Introduction to Statistical Reasoning - STA 215

Introduction to descriptive statistics, normal distributions, correlation and linear regression, sampling, experiments, chance phenomena, one- and two-sample estimation and hypothesis testing, chi-square tests, and use of statistical software.

College Physics I - PHY 131

Algebra and trigonometry based approach to Newtonian mechanics, including Kinematics, Newton's laws, momentum, energy, and rotation.

College Algebra - MAT 114

Real and complex numbers, integer and rational exponents, polynomial and rational equations and inequalities, graphs of functions and relations, exponential and logarithmic functions.

Introduction to Forensic Science - FOR 301

Introduction to the application of scientific methods for the examination of physical evidence in the criminal justice system; an overview of the forensic analysis of firearms, fingerprints, drugs, blood, hair, fibers, paint, glass, arson debris, etc.

FREE ELECTIVES

CHOOSE 12 HOURS OF FREE ELECTIVES

A TOTAL OF 120 CREDIT HOURS REQUIRED

Additional requirements not listed include ECU's standard general education requirements.

EKU UNDERGRADUATE CATALOG

What can I do with this degree?

CAREER OUTLOOK

The United States Bureau of Labor Statistics (BLS) predicts employment of fire inspectors and investigators is projected to grow 6 percent by 2031, about as fast as the average for all occupations. Fire inspectors will be needed to assess potential fire hazards in newly constructed residential, commercial, public, and other buildings in the coming decade. Fire inspectors will also be needed to ensure that existing buildings meet updated and revised federal, state, and local fire codes each year.

Job Opportunities Include:

- Fire marshal
- Fire investigator (public and private)
- ATF agent
- Firefighter
- Building inspector
- Fire and arson investigations detective
- Insurance company consultant

SALARY ESTIMATES

Why should I choose ECU Online?

STUDENT PERSPECTIVE

This degree helped me in many ways. The biggest way it has helped is in building my confidence in my abilities. I had taken classes on fire investigation through my local fire department, however, I lacked the hands-on experience. Not only did I receive hands on training I was looking for, but I also got experience in explosion scenes and most importantly report writing.

- Kaleb Vonderwell,

Fire, Arson & Explosion Investigation Graduate
Indiana Department of Homeland Security Fire Investigator

SEE OTHER ECU STUDENT STORIES

Can I afford to go back to school?

FINANCIAL AID & SCHOLARSHIPS

Paying for school doesn't have to be overwhelming. Almost everyone, regardless of income, can qualify for some form of financial aid. We're here to help you learn about available options and what may be right for your unique situation.

- Grants
- Federal Loans
- Private Loans
- Military Benefits
- Departmental Scholarships
- Outside Scholarships
- Foundation Scholarships
- Employer Tuition Reimbursement

MORE FINANCIAL AID INFO

Questions about financial aid?

Big E Central

BigECentral@eku.edu

(859) 622-2361

EKU Online offers a range of scholarships designed to address the financial needs of our students, lower the overall cost of attendance and reward a student's scholastic achievements.

EKU UNIVERSITY SCHOLARSHIPS

Start Strong Scholarship Fund (undergraduate programs only)

The Start Strong Scholarship provides up to \$2,000 per year of need-based scholarship funds for newly admitted undergraduate students. Candidates must have a completed FAFSA application, but are not required to be eligible for FAFSA awarded funding.

Stay Strong Scholarship Fund (undergraduate programs only)

The Stay Strong Scholarship provides up to \$1,000 per year of need-based scholarship funds for qualified undergraduate students who have completed two semesters with EKU Online and have earned a 3.5 GPA or higher their previous semester. Candidates must have a completed FAFSA application, but are not required to be eligible for FAFSA awarded funding.

Omega Nu Lambda Honor Society Scholarship Fund

In recognition of your accomplishments as an online student, Omega Nu Lambda Honor Society provides members with an opportunity to apply for a scholarship in both fall and spring. Fall scholarships are announced in November and spring are announced in April.

EKU Foundation Scholarship

The Eastern Kentucky University Foundation, through the generosity of its donors, offers a variety of scholarship opportunities to deserving students. EKU Foundation scholarships are awarded through the University Scholarship Office and at college and department levels. New and renewable awards of [EKU Foundation scholarships](#) are subject to available funds each year.

MORE SCHOLARSHIP INFO

When will I start classes?

APPLICATION DEADLINES

TERM	APPLY BY	BEGIN CLASSES
Fall A	July 5	August
Fall B	August 31	October
Spring A	November 30	January
Spring B	January 31	March
Summer A	April 5	May
Summer B	May 31	June

What do I need to apply?

ADMISSION REQUIREMENTS

First-Time Freshman

- Standard Admission:
high school cumulative GPA (unweighted): 2.50 or higher
- Success First Admission:
high school cumulative GPA (unweighted): 2.00-2.49
- Minimum high school GPA of 2.0 on a 4.0 scale

While test scores are not required for admissions purposes, students are encouraged to submit test scores for proper course placement in English and mathematics courses.

Transfer Students

- Cumulative grade point average (GPA) of 2.0 on a 4.0 scale
- In good academic and financial standing at previous institution
- Students who have earned 23 hours or fewer of college credits after high school graduation must also provide a final high school transcript and meet the requirements for incoming freshmen

ADMISSION INFORMATION

How do I apply?

APPLICATION PROCESS

First-time Freshman:

Step 1: Complete the free online application at:

https://application.eku.edu/portal/apply_eku

START MY APPLICATION

Step 2: Submit your high school transcripts to the Office of Admissions.

Step 3: Submit ACT or SAT scores (not required, but encouraged for determining appropriate course placement).

Transfer Students:

Step 1: Complete the free online application at:

https://application.eku.edu/portal/apply_eku

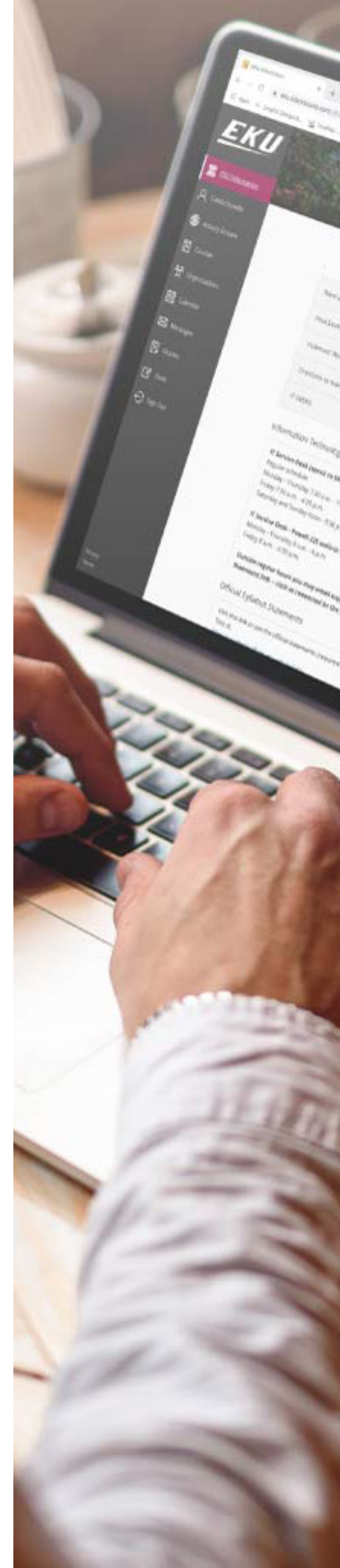
START MY APPLICATION

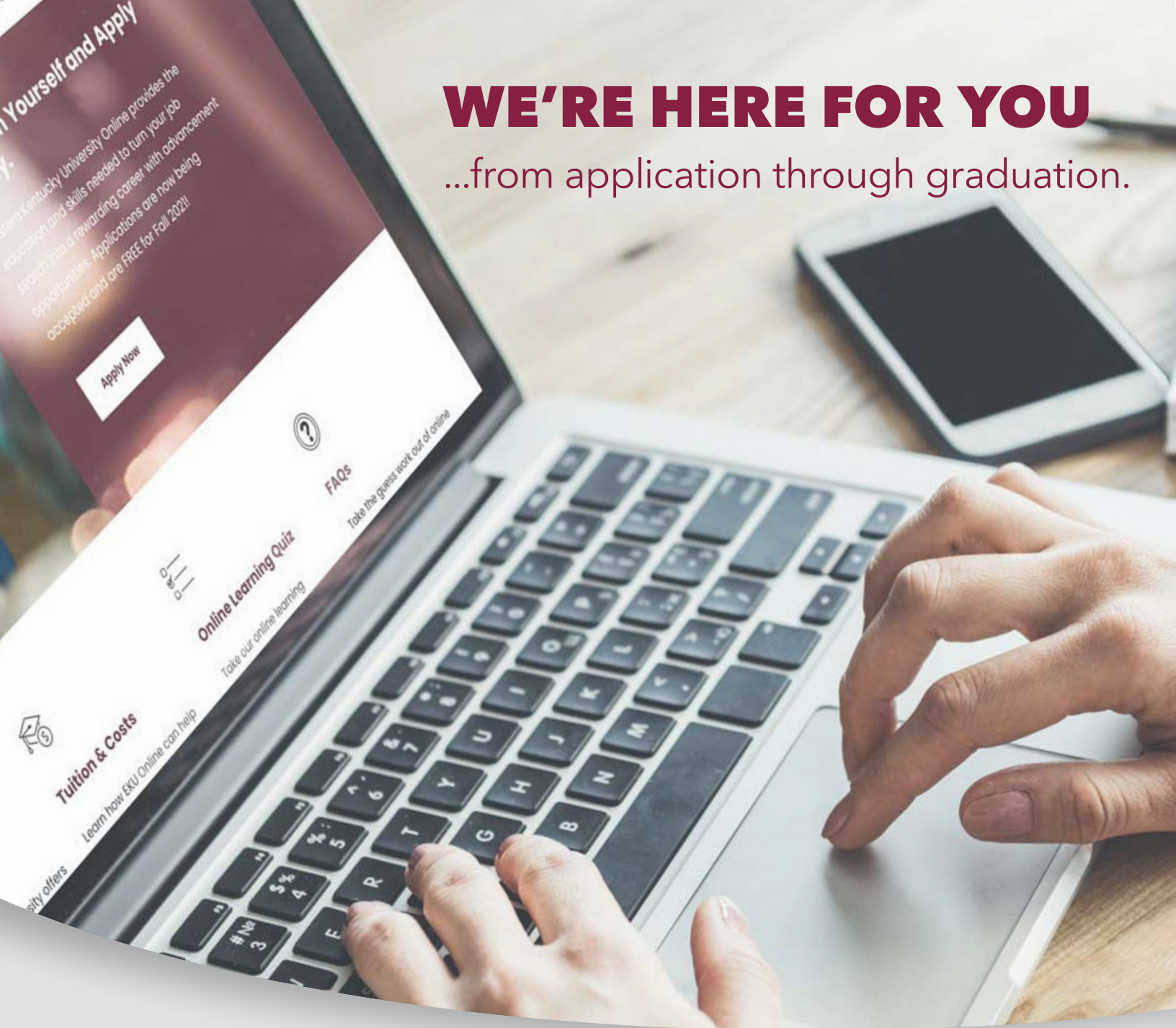
Step 2: Send us your high school transcript (if you have 23 or fewer credit hours).

Step 3: Send us your official transcripts from each accredited university you attended, including dual credit from high school.

What are you waiting for?

GET STARTED TODAY!





WE'RE HERE FOR YOU

...from application through graduation.



Jordan Tayce
Enrollment Advisor

☎ 859-622-7964

✉ Jordan.Tayce@eku.edu

SCHEDULE A CALL

EKU
ONLINE

Eastern Kentucky University is an Equal Opportunity employer and educational institution and does not discriminate on the basis of age (40 and over), race, color, religion, sex, sexual orientation, gender identity, gender expression, pregnancy, ethnicity, disability, national origin, veteran status, and/or genetic information in the admission to, or participation in, any educational program or activity (e.g., athletics, academics and housing) which it conducts, or in any employment policy or practice. Any complaint arising by reason of alleged discrimination should be directed to the Office of Institutional Equity, Eastern Kentucky University, Jones Bldg. Room 416, Richmond, Kentucky 40475 (859) 622-8020, or the Assistant Secretary for Civil Rights, U.S. Department of Education, Office for Civil Rights, Lyndon Baines Johnson Department of Education Building, 400 Maryland Avenue, SW, Washington, DC. 20202 1-800-421-3481(V), 1-800- 877-8339 (TTY).