

ILLINOIS FIRE SERVICE INSTITUTE
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



ON OUR
WATCH

ANNUAL REPORT: JULY 1, 2023 – JUNE 30, 2024

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MESSAGE FROM THE DIRECTOR



This year was a special one for the Illinois Fire Service Institute (IFSI) as we celebrated our centennial year of operation. It is customary for this annual message to be filled with positive notes of training successes, staff accomplishments, and organization growth. This year, it brings me pleasure to also include a recap of our 100-year celebration activities. With no hesitation, I can write it was truly a wonderful year.

In late 2023, the IFSI Team launched our year-long centennial celebration campaign. The endeavor included salutations to our past and present students and staff, acknowledgements of the partners and affiliates who supported our operational growth, and numerous highlights of the many challenges and successes that occurred through the years with the evolution and expansion of our programs and training facilities. The campaign included multiple regional media segments and hosting a community open house where over 1,000 members of surrounding areas experienced IFSI through hands-on, interactive training demonstrations. Our celebration culminated during our annual Fire College event with an official centennial recognition ceremony and street fair celebration. Over 700 students, instructors, staff, and special guests joined us for the festivities. It was a weekend to remember.

While our 100-year celebration brought opportunities for engagement and fellowship, the IFSI Team also delivered quality training programs across the state and nation. In FY24, IFSI saw a 21% increase in the number of enrolled students and a 12% increase in our total student reach. It is with great pride that I can also note we served students from every county in the State of Illinois. As Director, I remain committed to ensuring that our numbers are always backed with top-quality and effective training across all programs.

IFSI consistently focuses on providing training, education, and information that is also at the forefront of national standards. Our resolute team of curriculum specialists and subject matter experts consistently review training requirements and industry trends. In FY24, IFSI supported the update of 15 existing courses and the development of 12 new courses to ensure we meet the training needs of the students and departments that we serve.

I would be remiss if I did not acknowledge that our many successes and celebrations in the fiscal year are a direct result of the talents and commitment of the IFSI Team. Our staff and instructors remain the backbone of the organization. As I took the time to reflect on our growth since 1925, it was apparent that our staff has always been the driving force behind our successes. Our team today continues to deliver with tenacity and passion. I am honored to represent this talented group of individuals.

Thank you for your support of the Illinois Fire Service Institute. It is my pleasure to support our mission of *Helping Firefighters Do Their Work Through Training, Education, Information, and Research.*

DIRECTOR, ILLINOIS FIRE SERVICE INSTITUTE



FY 2024 STATS AT A GLANCE



TOTAL REACH*
63,766

TOTAL STUDENTS
58,171

COURSES OFFERED
1,244

CLASS HOURS
16,076

STUDENT HOURS**
917,128

FIRE DEPARTMENTS SERVED
1,002

ILLINOIS COUNTIES REACHED
102/102

STUDENTS REACHED FROM
OTHER AGENCIES***
6,867

* Total reach includes outreach activities where individuals received training, education, or information from members of the IFSI Team, but were not registered for a specific class or training activity. Outreach activities include presentations, conferences, workshops, webinars, and national stage deliveries.

** Includes local departments using facility space for training.

*** Students reached from other agencies: education, EMS, health, government, police, and industry.

ENROLLMENT HIGHLIGHTS

FIREFIGHTING

46%

SPECIAL OPERATIONS TRAINING PROGRAM

29%

LEADERSHIP AND COMMAND PROGRAM

19%

SPECIAL EVENTS/OUTREACH

6%



IFSI FUNDING SOURCES

Total Annual Operating Budget
\$21,062,631*

Gifts In Kind Support
\$1,515,000

	\$4.726 M	Fire Prevention Fund (General) – 22%
	\$945,200	Fire Prevention Fund (Cornerstone) – 4%
	\$4.726 M	Cost Recovery (Student Fees) – 22%
	\$2.734 M	Grants (Federal & Private) – 13%
	\$5.598 M	Grants (State) – 27%
	\$1.497 M	Gifts – 7%
	\$298,738	Endowments (Market Value) – 1%
	\$537,586	Indirect Cost Recovery – 3%

**Represents an increase across 2 fiscal years.*

REGISTRATIONS BY LOCATION

70%

COMPLETED COURSES
AT LOCATIONS
OTHER THAN
IFSI MAIN CAMPUS

30%

COMPLETED COURSES
ON MAIN IFSI CAMPUS

AFFILIATE SUPPORT

Our many strategic affiliations allow us to share knowledge and resources with leading educators, researchers, corporations, professional associations, and other organizations. In addition to those listed, we are grateful for the support received through fire service vendors and suppliers who contribute to the fulfillment of our mission.

IFSI AFFILIATES:

- Office of the Illinois State Fire Marshal
- Mutual Aid Box Alarm System - MABAS
- Illinois Community Risk Reduction Task Force
- Illinois Fire Chiefs Association
- Illinois Firefighter's Association
- Illinois Association of Fire Protection Districts
- Associated Fire Fighters of Illinois
- Illinois Professional Firefighters Association
- Illinois Society of Fire Service Instructors
- Illinois Fire Safety Alliance
- Illinois Fire Inspectors Association
- North American Fire Training Directors – NAFTD
- Northern Illinois Alliance of Fire Protection Districts
- Illinois Chapter International Association of Arson Investigators
- State of Illinois Fire Caucus
- Illinois Department of Natural Resources
- Illinois Propane Education and Research Council

ENROLLMENT BY CAREER TYPE

VOLUNTEER

37%

PAID

27%

PAID ON-CALL

21%

COMBINED

15%

IFSI RESEARCH PROGRAM

LAB REMODEL & MOBILE LAB:

- The current lab space has been renovated and now accommodates genomic, epigenomic, proteomic, and metabolomic research to further identify the effects of carcinogen exposure on cancer progression and cardiovascular events.
- IFSI has purchased a Liquid Chromatographer-Mass Spectrometer (LC/MS) for processing human specimens for metabolomic studies.
- IFSI acquired a mobile lab to facilitate collection of biological samples from firefighters who desire to participate in the Illinois Firefighter Cancer Research Project. With this additional laboratory, IFSI research team will be able to meet firefighters where-they-are.



IFSI RESEARCH LABS VISION/EXPANSION:

After recognizing the interdisciplinary expertise the research team now offers, the vision of the Research Labs has expanded into three pillars of firefighter health and safety: Biological and Chemical Sciences, Engineering, and Nutrition and Exercise. The expanded vision has allowed each research team member to approach firefighters' health and safety holistically.

FUTURE RESEARCH PROJECTS:

- The Illinois Firefighter Cancer Risk Study (ILCRS) is a partnership between firefighters and researchers focused on early cancer detection and prevention. This project will study how firefighting impacts the health of firefighters and provide screening for early cancer detection and prevention.

ONGOING RESEARCH PROJECTS:

- Fire Safety Preparedness for Individuals who use Wheelchairs and Scooters Living with Spinal Cord Injury. Led by Dr. Laura Rice from Kinesiology & Community Health, funded by the Craig H. Neilsen Foundation.
- Effect of PFAS on Firefighters' Health. Research was led by Dr. Joseph Irudayaraj, Professor of Bioengineering and Associate Director of Cancer Center at UIUC, funded by UIUC Office of Research. How PFAS can affect firefighter's health.
- Augmented 360 Video for Remote Incident Command in Firefighter Operation. Led by Dr. Klara Nahrstedt from UIUC Department of Computer Science along with Dr. Zhisheng Yan from George Mason University.
- Development of Contamination Resistance as a Measure for Firefighter Protective Clothing. Led by Dr. Bryan Ormond at North Carolina State University. Evaluating PPE effectiveness in the absence of PFAS.
- On Wireless Physiological Monitoring for Assessing Heat Stress Over Extended Periods. Project is led by Dr. Kaitlyn Crawford, University of Central Florida.

PEER REVIEWED PUBLICATIONS:

- On the Fire Hose Kickback Force in Solid Water Streams. *Fire Technology* (2024). <https://doi.org/10.1007/s10694-023-01539-9>
- Evaluation of self-contained breathing apparatus (SCBA) weight on firefighter stamina, comfort, and postural stability. *Ergonomics*, 1-14. <https://doi.org/10.1080/00140139.2024.2375026>
- Thermal degradation of self-contained breathing apparatus facepiece lenses under radiant thermal loads. *Journal of Fire Sciences*. 2024;42(3):236-247. <https://doi.org/10.1177/0734904124122792>
- Impact of firefighter hood design on range of motion, noise production and hearing. *Ergonomics*. 2023 Dec 5:1-10. <https://doi.org/10.1080/00140139.2023.2290987>

A complete list of past publications can be found at <https://www.fsi.illinois.edu/research/publications.cfm>

INTERNATIONAL PROGRAM HIGHLIGHTS

IFSI Library outreach services has built a viable global community of **883** individuals from **217** organizations. IFSI International Programs answered **10,304** international requests in FY2024. Since April 2020, the International Program has organized **111** lecture series on library and information science, fire safety, Chinese arts, and visiting scholars' research via Zoom with **8,371** participants throughout the world. Since 2005, the initiatives Chinese Librarian Scholarly Exchange Program (CLSEP) and the Visiting Scholar Program have been highly successful. The CLSEP has received **449** librarians from **146** organizations and the Visiting Scholar Program has hosted **189** scholars from **91** institutions in China, Brazil, South Korea, and the Netherlands since 2008.

In FY24, 18 Chinese visiting scholars arrived in Champaign for hands-on, live fire training. They came from all areas of China; including Beijing, Hangzhou, Zhenjiang, Chengdu, Wuhan, Dalian, Guangzhou, and Harbin.

LIBRARY

The IFSI Library is the only library in the state dedicated to fire and emergency services and is the third largest fire and emergency services library in the United States. The IFSI Library provides services in the key areas of reference, circulation, and interlibrary loans.

FY2024 HIGHLIGHTS:

- **354** items were added to the collection, including **217** general donations
- **6,333** items were loaned, including **140** through interlibrary loans
- The online subject guides (LibGuides) were viewed **36,638** times
- **37** user training workshops were delivered to **420** firefighters, fire service professionals, IFSI and UIUC staff
- **4,808** training and outreach emails were sent to **372** Illinois fire departments

OPERATIONAL ACHIEVEMENTS

Achievements in key areas include a record high **20,338** reference requests in FY2024, an increase from **12,285** in FY23.

These reference requests include:

- **4,754** from Illinois firefighters and fire departments
- **1,880** from IFSI instructors, staff and students
- **3,400** UIUC staff and students, libraries and general public
- **10,304** from international patrons

LIBRARY GRANTS COMPLETED:

The IFSI Library received one grant in FY24: *Libraries as Partners for Emergency Preparedness and Response in Times of Crisis* through the Institute of Museum and Library Services (IMLS) National Leadership Grants for Libraries program. The project is ongoing through July 2025 and is a preliminary investigation into library partnerships with emergency response groups during community wide crises.

In FY24, 605 Illinois libraries completed the first survey.

FY25 activities will focus on the project's 2 two-day national Community Engagement Roundtables in January and February.

The IFSI Library maintains the Illinois Firefighter Medal of Honor and Medal of Valor Database and the Illinois Firefighter Line of Duty Death Database (IFLODD).

- The Illinois Firefighter Medal of Honor and Medal of Valor Database includes **302** total recipients, **171** total incident summaries, **283** IFSI student recipients and **45** IFSI instructor recipients.
- Since May 2007, IFLODD has received **191,669** database hits and holds **919** firefighter records covering over 160 years. The records include **720** total incident summaries, **1,563** total images, and **14** total oral history interviews.

The Illinois Fire Service Archives and Institutional Repository includes materials about Illinois fire departments, relevant COVID-19 information and documents, IFSI operational documents from various years, promotional materials, and images.

- In FY2024, the Library had **4,491** reference interactions related to the IFSI Archives.

CURRICULUM, TESTING, AND CERTIFICATION

The Illinois Fire Service Institute continues to offer the highest quality in training and education. IFSI maintains accreditation with the National Board on Fire Service Professional Qualifications (Pro Board) and International Fire Service Accreditation Congress (IFSAC). IFSI continues to expand national certification opportunities for our students.



Curriculum

- Supported the update of 15 existing courses and the development of 12 new courses, including:
 - ♦ *First Due for Fire Alarms*
 - ♦ *Respectful Entry*
 - ♦ *Responder Intervention Team (RIT) Chief*
 - ♦ *Small Unmanned Aircraft Systems (sUAS) Operations*
- IFSI delivered 110 courses that awarded EMS Continuing Education Units (CEUs)

Testing

- 6 Test Bank validations
- Off-site CBT testing for various regional exam locations and numerous program deliveries are now available in addition to all campus exams
- Maintained, created, and verified reliability/validity of 36 exams which hold national and Illinois state certification
- 6,338 graded exams and a 93% student pass rate on first attempt

Certification

- 41 Pro Board and 20 IFSAC approved levels
- Issued 3,677 Pro Board certifications and 1,290 IFSAC certifications

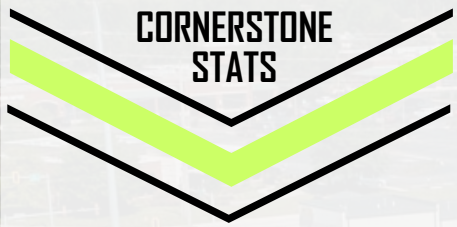


The Cornerstone Program supports fundamental and essential skills training for fire departments and mutual aid organizations throughout the state. Training is coordinated through eight IFSI Regional Representatives. Courses are funded through the Office of the Illinois State Fire Marshal and available at no cost to students or fire departments.

DELIVERY BY REGION

Region	Classes	Students	Student Hours
Northeast	59	1152	8724
Cook County	22	423	3508
North Central	32	712	8461
Northwest	30	686	4822
Central	77	1265	6503
East Central	89	1911	9830
Southwest	169	2704	13002
Southern	48	750	5860
Other*	9	531	3763
TOTAL	535	10,134	64,473

*These deliveries supported multiple regions.



CLASSES DELIVERED
535
 STUDENT HOURS
64,473
 STUDENTS REACHED
10,134

LEADERSHIP DEVELOPMENT AND COMMAND PROGRAM (LDCP)

Promoting up through the ranks of a fire department is a common goal. IFSI Leadership Development and Command Program courses ensure that students get the training and preparation necessary to continue on a rewarding and safe career path. LDCP includes training in the following areas:

- ACTIVE SHOOTER INCIDENT MANAGEMENT (ASIM)**
- INSTRUCTOR TRAINING AND DEVELOPMENT**
- LEADERSHIP DEVELOPMENT AND DECISION MAKING (LDDM)**
- NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) / INCIDENT COMMAND SYSTEM (ICS)**
- OFFICER DEVELOPMENT**
- RESILIENCY DEVELOPMENT**
- SCHOOL SAFETY AND VIOLENT EVENT INCIDENT MANAGEMENT (SSAVEIM)**

FY 2024 LDCP Course Highlights:	# Students	# Hours
Active Shooter Incident Management (ASIM) - Basic and Advanced	1,117	12,392
Instructor – All Courses	705	28,072
Leadership Development and Decision Making (LDDM) – All Levels	327	5,196
National Incident Management System (NIMS) / Incident Command System (ICS)	912	18,376
Officer	1,115	71,567
Resiliency	697	1,141
School Safety and Violent Event Incident Management (SSAVEIM)	1,211	9,616



FIREFIGHTING PROGRAM

The IFSI Firefighting Program offers hands-on training opportunities for first responders. Courses provide students with a realistic and challenging learning experience.



	# Students	# Hours
Advanced Technician Firefighter / NFPA FF II	72	2,880
Basic Firefighter / NFPA FF I Academy	104	38,480
Basic Operations Firefighter / NFPA FF I Blended	269	48,420
Basic Firefighter / NFPA FF I Online (Mods A, B, C)	228	13,370
Courage to be Safe	156	808
Emergency Vehicle Operations	287	876
Engine Company Operations	334	2,817
Fire Apparatus Engineer	109	4,360
Fire Service Vehicle Operator	986	6,280
Fireground Command Officer School	32	1,280
Fireground Company Officer School	144	5,724
Forcible Entry	412	1,552
Light and Fight (on and off campus)	347	2,760
Liquefied Petroleum Gas (Proprane) Firefighting	956	2,910
Search Techniques for the Fireground	32	768
Smoke Divers (Advanced Breathing Apparatus Specialist)	85	2,024
State of Illinois Traffic Incident Management	240	960
Truck Company Operations	87	1,584
Wildland Firefighting (all courses)	292	3,426

The highlighted courses above are a small representation of the full cache of firefighting courses offered.

SPECIAL OPERATIONS TRAINING PROGRAM

The Illinois Fire Service Institute delivers technical rescue awareness and hazardous materials training to first responders. Courses offer immersive training experiences that challenge even the most experienced students. IFSI SOTP is at the national forefront of technical rescue and hazardous material training programs.



	# Students	# Hours
Agriculture	876	4,161
Confined Space	211	8,390
Hazardous Materials	30,801	105,112
Responder Intervention Team (RIT)	494	12,016
Rope Rescue	380	17,008
Small Unmanned Aircraft Systems (UAS)	13	440
Structural Collapse	157	7,060
Technical Rescue	467	2,639
Trench Rescue	255	8,936
Vehicular Rescue	2,096	21,844
Wilderness Search and Rescue	54	432



OUR MISSION

*Helping Firefighters
Do Their Work Through
Training, Education,
Information, and Research.*

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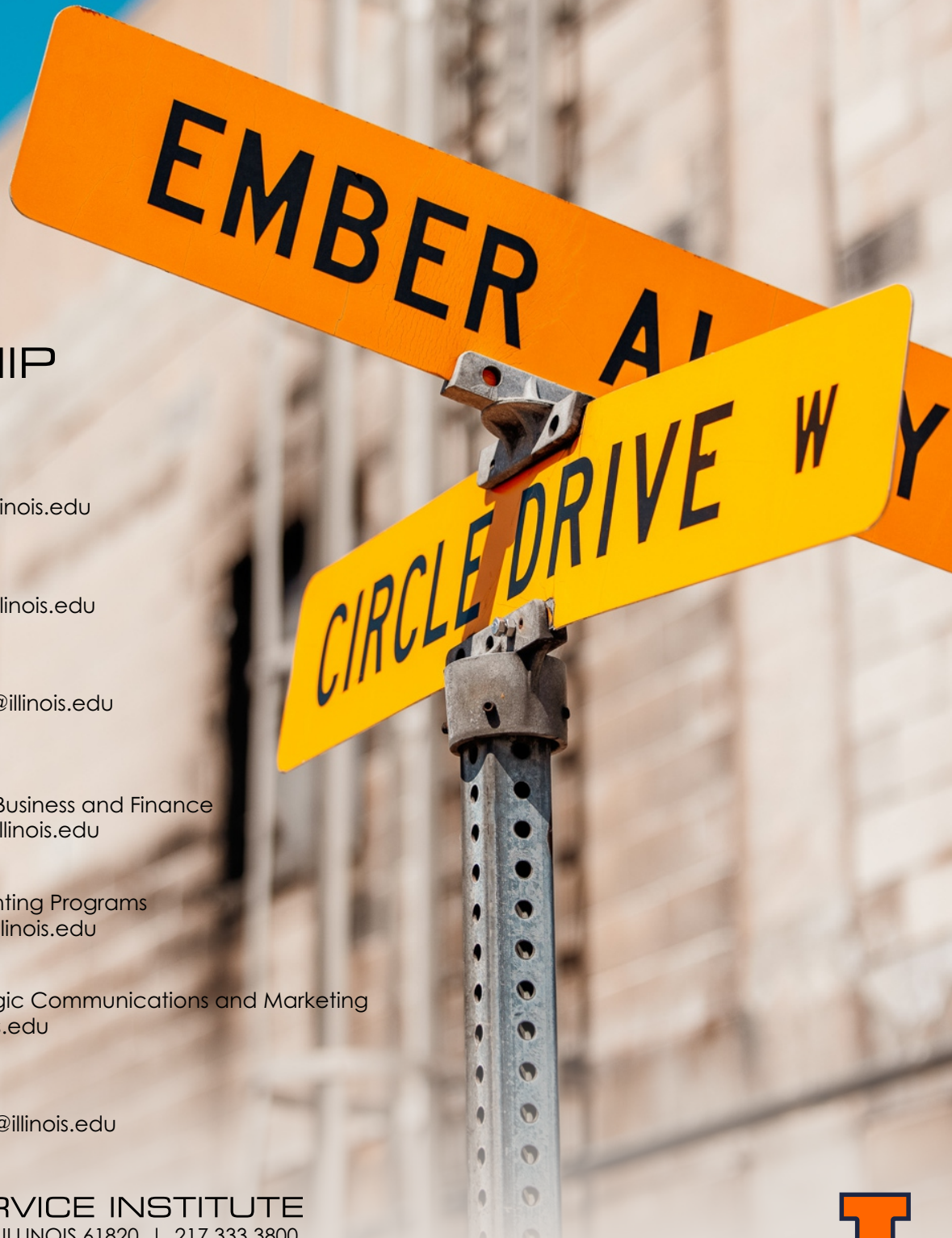
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