







ON OUR WATCH

ANNUAL REPORT
JULY 1, 2019 - JUNE 30, 2020

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University of Illinois at Urbana-Champaign

IFSI ANNUAL REPORT

A MESSAGE FROM DIRECTOR MORTENSON

It is my honor to present the 2020 Annual Report of the Illinois Fire Service Institute at the University of Illinois at Urbana-Champaign. After eight years of preparing these letters, I still find myself reflective on the many changes IFSI encounters each year. Undoubtedly, FY20 was no exception. Despite unprecedented and challenging times due to the COVID-19 global pandemic, the Illinois Fire Service Institute remained steadfast to the fulfillment of our Mission.

In the first three quarters of FY20, the Illinois Fire Service Institute (IFSI) delivered training and education to 53,195 individuals. IFSI was forced to postpone or cancel virtually all training deliveries in the fourth quarter (April, May, June). Despite this reality, internal forecast models indicated that we were on track to train or educate approximately 67,000 students. Even with these significant schedule adjustments, the Cornerstone Program saw a 14% increase in the number of students receiving training through the program and a 13% increase in the number of fire departments reached. The Special Operations Training Program supported 298 more classes. We increased student attendance by 42% in our National Fire Academy course deliveries, and the IFSI Resiliency Project brought awareness level training to 462 more students in the fiscal year. These figures are a testament to our commitment to provide a full spectrum of relevant training opportunities for the Illinois fire service.

Our presence on the national and international stage also grew in FY20. IFSI was regularly featured in regional, state and national media outlets, to include multiple radio, television, podcast, and national print media channels. Segment topics included IFSI Research efforts, special events, IFSI mission, agriculture rescue awareness, veterans support programs, new training programs and resources, and IFSI technical rescue training programs. Additionally, we successfully created, secured, and managed multiple bids to deliver training at national fire service trade show conventions and conferences. The conferences included Fire Department Instructors Conference (FDIC), Intershut USA, Firehouse, Industrial Fire World, and Fire-Rescue International (FRI). We look forward to continuing these developing relationships in the next year.

Without question, our many successes are a direct result of the strong team of professionals that represent the Institute. Our dedicated instructors, staff, and even the students we serve faced the many challenges in FY20 with tenacity, passion, and patience. I could not be prouder to represent this group of talented professionals. I am grateful for their commitment and service.

Our programs are unparalleled. Our team and partnerships remain strong. I look forward to the opportunities and challenges that we will embrace in the next year. Thank you for your support of the Illinois Fire Service Institute. As I have stated each year, it is my privilege to support our Mission of *Helping Firefighters Do Their Work Through Training, Education, Information, and Research.*



Royal P. Mortenson
Director, Illinois Fire Service Institute



ILLINOIS FIRE SERVICE INSTITUTE

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Illinois Fire Service Institute (IFSI) is the statutory State Fire Academy for Illinois. It serves as the oldest continuous fire training institution in the United States. Since 1925, first responders from across the state, the nation, and the world have relied on IFSI to deliver hands-on, innovative, and top-quality training, education, and research.

FY 2020 NUMBERS AT A GLANCE:

52,936

STUDENTS REACHED

1,690

COURSES OFFERED

14,340

CLASS HOURS

916

FIRE DEPARTMENTS SERVED

208

OTHER RESPONSE ORGANIZATIONS TRAINED

516,850

STUDENT HOURS

102/102

ILLINOIS COUNTIES SERVED

237

UNIQUE DELIVERY LOCATIONS IN ILLINOIS

1,542

STUDENTS IN OFFICER TRAINING

SOCIAL MEDIA ENGAGEMENT

Facebook – Increased the number of Facebook followers to over **21,000** in FY20. Despite the uncontrollable postponement of training activities and special events due to COVID-19, the Facebook page increased page likes by **13%** and page followers by **19%** in FY20.

Twitter – Received **133,843** impressions with **4,710** profile visits. Averaged **367** impressions per day across the fiscal year. This was an 11% increase from the previous fiscal year.

Instagram – Averaged **3** postings per week highlighting course and program activities delivered across the state. Grew account followers by **30%** compared to the previous fiscal year.

LinkedIn – Maintained active presence on the IFSI LinkedIn account with nearly **500** followers. Closed out FY20 with a **30%** average monthly growth rate on page followers.

YouTube – This medium saw a **36%** increase in video views in FY20.



ENROLLMENT BY PROGRAM



STUDENT REGISTRATIONS BY LOCATION



- 64% 34,163 students completed courses at locations other than the IFSI main campus
- 18% 9,532 students completed courses at main IFSI campus in Champaign
- 18% 9,500 students completed courses through IEMA, IDOC

ENROLLMENT BY CAREER TYPE



- 52.5% Volunteer
- 18.04% Paid
- 14.14% Paid On-Call
- 15.32% Combined

facebook forum >>>>



In response to COVID-19, IFSI launched the Facebook Forum in March 2020. The forum was created to offer live, virtual training opportunities through the IFSI Facebook account, allowing for real-time engagement from viewers. Training topics ranged from trending COVID-19 issues to simulated live fire and hands-on essential firefighting skills. Forum training deliveries were shared on all IFSI social media channels following the live broadcasts.

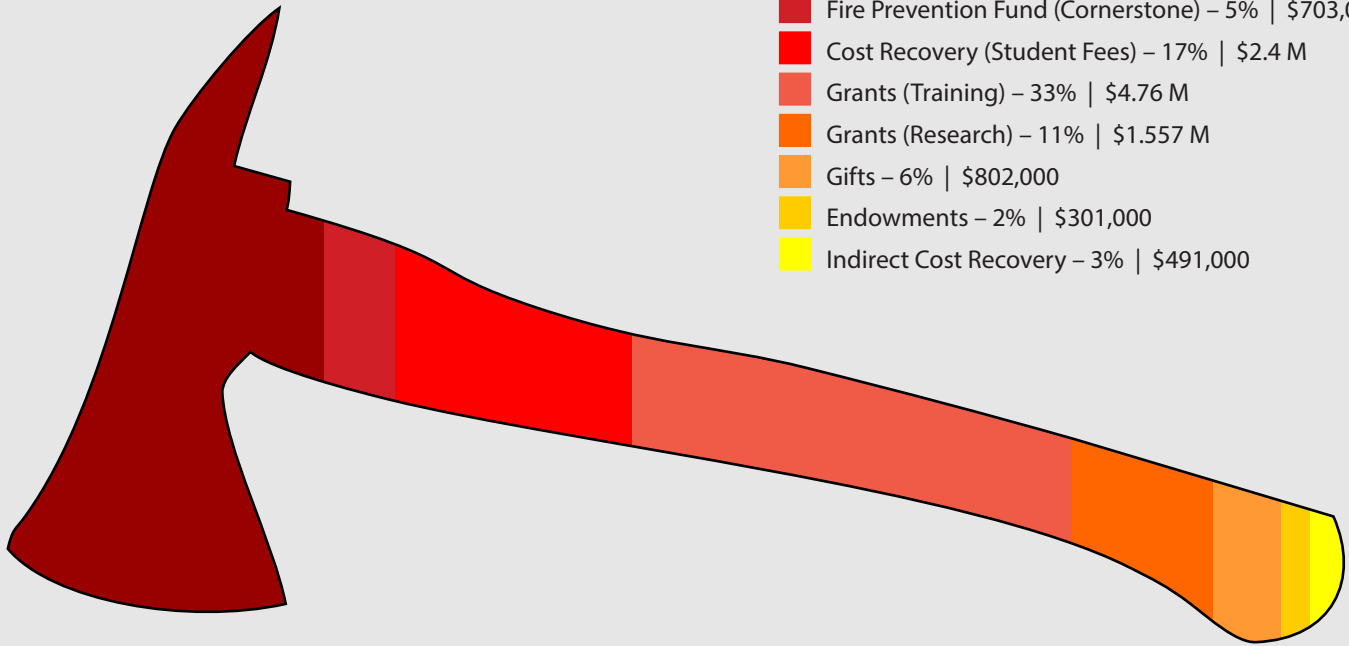
Forum participants were from 29 states and 26 countries.

FY2020 FACEBOOK FORUM IMPACT: March – June 2020

- 26 videos posted in the Forum reaching 289,700 video views
- 8,356 video views of posted forum training on the IFSI Youtube channel
- Video views on the page increased 295% compared to the previous three months
- Participants included residents from Illinois, Iowa, Indiana, Michigan, Wisconsin, Pennsylvania, Alaska, Hawaii, Florida, Arizona, Montana, New York, Alabama, New Jersey, Texas, Virginia, Ohio, California, Utah, North Carolina, Kentucky, Missouri, Tennessee, Arizona, Minnesota, Georgia, Nebraska, Oregon, Connecticut
- International Audience Engagement/Followers: Mexico, South Africa, Netherlands, Canada, Cambodia, Chile, Madagascar, Argentina, Turkey, Ukraine, Guatemala, UK, Colombia, Namibia, Peru, Germany, Australia, Puerto Rico, Myanmar, Japan, Sweden, Belgium, Cuba, Sri Lanka, Trinidad, France

Total Annual Operating Budget – \$14,527,000

IFSI FUNDING SOURCES



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 fulfilling our mission.

IFSI AFFILIATES:

- Office of the Illinois State Fire Marshal
- Mutual Aid Box Alarm System
- Illinois Fire Chiefs Association
- Illinois Firefighters 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
- Northern Illinois Alliance of Fire Protection Districts
- Illinois Chapter International Association of Arson Investigators
- State of Illinois Fire Caucus
- Underwriters Laboratory
- National Institute for Occupational Safety and Health
- Illinois Department of Natural Resources
- Illinois Propane Education and Research Council



CURRICULUM

The Illinois Fire Service Institute continues to offer the highest quality in training and education. Evaluation methods were audited and reviewed once again this year through a third-party process. IFSI has maintained accreditation with the National Board on Fire Service Professional Qualifications (Pro Board) and International Fire Service Accreditation Congress (IFSAC). IFSI continued to expand national certification opportunities for our students.

In FY2020, IFSI was reaccredited by The National Board of Fire Service Professional Qualifications. IFSI issued **2,535** Pro Board certifications and **793** IFSAC certifications. IFSI has **32** Pro Board approved levels and **8** IFSAC approved levels. The IFSI Curriculum and Testing staff scored **4,650** total IFSI exams and administered **41** OSFM state exams. The team has supported the update of **12** IFSI courses and the development of **1** new course. **91** IFSI courses award EMS Continuing Education Units (CEUs). Test validity and relevancy is critical to our programs. As a result, the testing office validated **14** test banks last year, ensuring we are testing the knowledge that the job requires.

FIREFIGHTING PROGRAMS

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

FIREFIGHTING PROGRAMS SUMMARY

	# Students	# Hours
AGRICULTURE	785	48
DRIVER/OPERATOR	67	416
FIRE PREVENTION	1,696	6,768
FIREFIGHTING (see course details below)	2,249	93,298
INVESTIGATION	518	15,472
OFFICER	1,542	42,088
OIL & GAS	1,046	3,865
VEHICULAR	260	9,616
WILDLAND FIRE FIGHTING	128	1,867
TOTALS	8,291	173,438

FIREFIGHTING COURSES

Course	# Students	# Hours
Advanced Apparatus Breathing Specialist (Smoke Divers)	56	1,344
Advanced Technician Firefighter / NFPA FF II	22	880
ARFF Apparatus Driver/Operator	22	528
Basic Firefighter / NFPA FF I Academy	64	17,920
Basic Firefighter / NFPA FF I Online	60	3,819
Basic Operations Firefighter / NFPA FF I Blended	171	47,880
Basic Pumper Operations	60	240
Emergency Vehicle Operations Online	181	440
Engine Company Operations	58	1,384
Fire Apparatus Engineer	75	2,880
Fire Attack and Suppression Techniques (FAST)	31	1,550
Fire Service Vehicle Operator	216	1,104
Mobile Water Supply Apparatus Operator	20	320
Responder Intervention Team Rescue Technician	120	4,800
Search Techniques for the Fire Ground	27	648
Special Events	789	5,998
Truck Company Operations	59	1,408
Traffic Incident Management Awareness	218	155

INDUSTRY

24 COURSES	1,723 STUDENTS	6,705 HOURS
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SPECIAL OPERATIONS TRAINING PROGRAM

The Illinois Fire Service Institute Special Operations Training Program (SOTP) 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 awareness and hazardous material training programs.

SPECIAL OPERATIONS TRAINING PROGRAMS SUMMARY

Course	# Students	# Hours
Confined Space	227	7,430
Hazardous Materials (IDOC)	16,643	93,438
Hazardous Materials (includes IEMA)	9,500	42,800
Rope Rescue	471	13,084
Structural Collapse	106	2,943
Technical Rescue	544	3,937
Trench Rescue	107	4,064
TOTALS	27,598	167,696

NATIONAL INCIDENT MANAGEMENT SYSTEM

The National Incident Management (NIMS) Program offers training in incident management to response organizations throughout the State of Illinois. In FY20, the NIMS/ICS Program delivered **40 classes to 987 students in 17 training locations.**

LEADERSHIP DEVELOPMENT & DECISION MAKING

The Leadership Development and Decision Making (LDDM) Program is a premier development/decision-making training and education course that has consistent themes, priorities, and lines of education in order to institutionalize the highest-quality leadership in the fire service. **In FY2020, the LDDM program impacted 522 students with 2,627 class hours and 25 different course offerings.**

RESILIENCY TRAINING FOR FIRST RESPONDERS

Resiliency training provides first responders with the necessary tools to remain resilient to the stressors that come with the job as well as stress from off the job. The First Responder Resiliency and Mental Health Awareness Project is infused in the curriculum of 34 IFSI courses. This training seeks to remove the stigma surrounding the discussion of mental health, trauma, and suicide. **Resiliency training reached 563 students through 26 courses for a total of 2,416 student hours in FY2020.**



The Cornerstone Program supports the delivery of essential skills training to local fire departments, MABAS Divisions and Mutual Aid Associations 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. **Of the 916 Illinois fire departments served in 2020, 824 of those departments received grant funded Cornerstone training.**

PROGRAM STATS

408
CLASSES DELIVERED
824
DEPARTMENTS SERVED
11,201
STUDENTS REACHED

DELIVERY BY REGION

Region	Classes	Students	Class Hours
Northeast	58	1,202	5,676
Cook County	14	307	1,713
North Central	46	1,124	5,775
Northwest	48	1,154	6,819
Central	51	1,017	4,722
East Central*	63	3,563	9,534
Southwest	79	1,803	8,344
Southern	49	1,031	6,908
TOTAL	408	11,201	49,491

*Includes Campaign Light and Fight courses



In May 2020, IFSI launched the Preliminary Exposure Reduction Project in collaboration with Office of the State Fire Marshal and MABAS-IL, based on research from IFSI, NIOSH, UL FSRI and Skidmore College:

- **1648 decon buckets delivered to Illinois departments**
- **2901 firefighters completed online training**

IFSI Research efforts published in multiple high impact academic journals to include:

- Journal of Occupational and Environmental Hygiene (JOEH),
- Journal of Thermal Science and Engineering Applications (JTSEA),
- Ergonomics, Applied Ergonomics, PLoS One
- National Institute of Standards and Technology

List of publications can be found at
<https://www.fsi.illinois.edu/research/2018.cfm>

Completed data collection in the following studies:

- IFSI PPE Interface Mannequin testing
- Underwriters Laboratory (UL) HVAC Gas Burner Project
- North Carolina State University project focusing on heat strain prediction project
- NC State University project focusing on metabolic cost of firefighting

Ongoing Data Collection:

- IFSI Personal Protective Equipment (PPE) Interface project in collaboration with NIOSH, UL Firefighter Safety Research Institute, and Skidmore College
- UL FSRI study of Fire Service Residential Home Size-Up and Search and Rescue Operations, laser-based measurements of hydrogen cyanide in real-time



IFSI Research welcomed Dr. Farzaneh Masoud as Director of Research Programs on Nov 1, 2019.

In FY2020, new collaborations were initiated and proposals generated with partners to include:

- University of Illinois at Urbana-Champaign
 - ♦ Chez Center for Wounded Veterans
 - ♦ Department of Kinesiology
 - ♦ Department of Nuclear Engineering
 - ♦ National Center for Supercomputing Applications (NCSA)
- Colorado State University
- National Institute for Occupational Safety and Health
- National Personal Protective Technology Laboratory (NIOSH NPPTL)
- University of Cincinnati
- Oregon State University
- National Development Research institute (NDRI)
- Los Angeles Fire Department
- Rice University
- NASA, Minerva Work Solutions
- National Fire Protection Research Foundation (NFPR)
- Patient-Center Outcomes Research Institute (PCORI)
- Rush Hospital, Chicago, IL
- San Diego Veterans Hospital
- VA Illiana Healthcare System, Danville, IL
- University of Central Florida
- Northwestern University



LIBRARY

The IFSI Library is the only library in the state dedicated to fire and emergency services. It is also the third largest fire and emergency services library in the United States. The library holdings included **74,594** titles as of June 2020.

FY2020 REFERENCE REQUESTS:

The IFSI Library Team answered **3,321** reference requests in total, including **106** in-depth, long-term reference requests

- **1,242** reference requests answered for IFSI staff and students
- **141** reference requests related to the IFSI Curriculum Department
- **133** reference requests dedicated to international partners' research
- **744** reference requests from firefighters/fire departments
- **303** reference requests answered for UIUC staff and students

FY2020 HIGHLIGHTS:

- The Library added **340** items to the collection
- Received **585** general donations
- Added **41** borrowers
- Loaned **1,345** items
- Received **27,806** views of online subject guides (LibGuides)
- Provided **253** items of IFSI Library materials to the Peoria Fire Academy
- Implemented **412** user training workshops; **382** fire departments reached with training materials via email
- Provided **382** Illinois fire departments with IFSI Library 2020 Powerpoint presentation
- Provided **6,383** archive reference interactions

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 staff also supports continued exhibitions in the IFSI Firefighter Memorial Hall. **In FY2020, 5 former instructors were added to the memorial exhibit.**

- **119,742** IFLODD database hits (since 5/2007)
- **903** IFLODD firefighter records
- **809** firefighters with incident summaries
- **1524** images and **14** total oral history interviews

Created the COVID-19 Archives Collection to preserve important documents related to the COVID-19 pandemic, including collections for IFSI and the Illinois fire service and comprehensive IFLODD records for **3** Illinois firefighter line of duty deaths related to COVID-19.

Worked with the Illinois Digital Environment for Access to Learning and Scholarship (IDEALS) to make key IFSI documents widely available to firefighters and the general public, with over **183,278** downloads since 2006.

**OUR MISSION:
HELPING FIREFIGHTERS DO THEIR WORK
THROUGH TRAINING, EDUCATION,
INFORMATION, AND RESEARCH.**

INTERNATIONAL PROGRAM HIGHLIGHTS

- IFSI hosted the Library Scholarly Exchange Program for the **16th** consecutive year. As of FY2020, the Librarian Scholarly Exchange Program had received **421** librarians from **145** organizations. The Visiting Scholar Program hosted **140** scholars from **76** institutions.
- The International Programs team coordinated and hosted **15** virtual scholarly activities during the COVID-19 response period.
- Chinese Librarians Scholarly Exchange Program (July 2019): **41** librarians participated in the 2019 program.
- IFSI Hazardous Materials Technician Training Program (October 2019): **2** fire officers from the Hong Kong Fire Services Department joined the training program. Since 2008, a total of **60** Hong Kong fire officers have been trained at IFSI.
- International Visit (October 2019): Head Librarian Dr. Lian Ruan visited Jiangsu University Library in Zhenjiang and attended the International Symposium on Library Strategic Planning and Discipline Development with other librarians from the United States.
- International Visit and Presentation (November 2019): IFSI attended the China Public Safety Conference in Beijing. Richard Kesler, IFSI Deputy Director of Research, delivered a presentation on "Science and Research in Supporting Firefighter Safety and Life Health."

In FY20, the International Program and the Library team submitted publications to the Chinese American Librarians Association (CALA), Shanghai International Library Forum, and DH 2020 (Shanghai) -- Benevolence and Excellence: Digital Humanities and Chinese Culture Conference. These publications were posted and shared through multiple national and international media channels.



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

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