In FY2016, IFSI delivered training to 62,750 students.*

• 1265 different courses
• 14,741 class hours
• 463,094 student hours
• 921 of 1168 Illinois fire departments trained
• 128 other response organizations
• 2256 students in officer training courses

Classes were offered in 288 locations and attended by first responders from 100 of 102 Illinois counties

*As an affiliate of a land-grant university, IFSI is committed to fulfilling its responsibility for public outreach. In FY2016, these efforts included outreach programs to 15,908 people.
From Director Mortenson

I am pleased to present the 2016 Annual Report of the Illinois Fire Service Institute at the University of Illinois at Urbana-Champaign. It was an astonishingly robust and productive year despite the impact of the state budget impasse on IFSI educational and training programs.

Budget issues affected enrollment as Cornerstone classes – those delivered at no charge to local departments – were suspended from October 1, 2015 to January 1, 2016. Despite the three-month suspension of Cornerstone deliveries, we still provided crucial Cornerstone training to 11,874 students – approximately 2600 students fewer than the previous year. Our technical rescue, HazMat, firefighting courses, and training props continued to improve, innovate, and challenge our students. Every program and course represents the best the nation has to offer in training and education – all grounded in national standards and best practices. This is only possible through the hard work and dedication of our staff and instructors.

We continued to expand our on-line, blended learning curriculum and IFSI’s Leadership Development and Decision Making (LDDM) program. The LDDM program executed the first full pilot course in March 2016. The LDDM program is designed to train all levels of the fire service in leadership and decision-making skills utilizing a challenging “Socratic” instructional methodology, while institutionalizing “cradle-to-grave” leadership skills for firefighters at every rank.

Our firefighter life safety research department leads the U.S. Key project partnerships with UL, the National Institute of Standards and Technology, the University of Illinois, other universities, and private industry, aim to improve firefighter safety and survival through applied research in real-world firefighter risks and hazards.

In fiscal year 2016, IFSI completed a feasibility study of potential new burn site locations in the University South Farms area that will provide expanded hands-on, live-fire training, such as modern Class A and Class B live-fire facilities and expanded industrial training capabilities. This process is slow and deliberate and will take years but we will get there. We are working closely with U of I entities and stakeholders to ensure IFSI continues to have a state-of-the-art training capability that will serve our firefighters for decades to come.

I want to thank all of you for your dedicated work at IFSI. Your efforts directly contribute to safer communities. I am proud to serve.

Royal P. Mortenson
Director
SOME HIGHLIGHTS OF THE PAST YEAR

• Engine and Truck Company Operations Course programs have been paired, and we’ve begun running classes together. Students learn respective engine/truck skills, and then join in a combined coordinated fire attack experience.

• The Responder Intervention Team Class — offering training in the rescue of trapped firefighters in heat and smoke — was one of IFSI’s most in-demand classes in fiscal 2016, with 259 students and eight classes.

• IFSI continues to develop tactical leadership. Sixty-five firefighters trained through the Basic Company Officer program and 25 took Command Officer courses.

• Acquired structure burn offerings are on the rise, offering real-world individual and coordinated training for volunteer, paid on-call, and career fire department members. We were able to include Acquired Structure training at Thomasboro during the June Fire College.

• Vehicle Machinery Operations and Vehicle Machinery Technician courses nearly doubled offerings because of class deliveries in Orland Park and Chicago.

• Hands-on basic Light and Fight courses reached 224 students, with more than four classes averaging 60 students.

• Despite state budget concerns, IFSI has expanded key programs. Arson/Fire Investigation course modules were held in four locations, with two days of continuing education at Rock Island Arsenal and the Kickapoo FPD.

TRAINING PROGRAMS

ENROLLMENT BY PROGRAM AREA

ENROLLMENT BY CAREER TYPE

WORLD-CLASS STAFF

The IFSI field staff includes more than 500 of the top professionals in the industry. Their carefully vetted credentials and practical experience have generated national and international recognition.

Instructional staff teach courses on and off campus and are involved in the Institute’s research activities. IFSI program managers oversee efforts in areas ranging from basic to advanced firefighting to technical rescue and agricultural response to wildland firefighting and industrial sector resources. Special Operations Training program managers focus on training in hazardous materials response, confined space, structural collapse, rope, and trench rescues.

Experienced scientists head up life safety research. The IFSI Library’s librarians and student assistants maintain a comprehensive storehouse of up-to-date fire science and safety resources available to fire departments across Illinois.

IFSI’s core field instructors apply their expertise in top-quality courses statewide. Most are active-duty firefighters and officers with years of real-world, hands-on experience. Little wonder that many seasoned firefighters return to IFSI for training throughout their careers.
Featured Events

June’s four-day 92nd Annual Fire College – America’s oldest continuous fire school – brought more than 450 firefighters to Champaign for hands-on training with the latest technologies and IFSI’s newest props and resources.

During a weekend of Champaign-based training in January, the 21st Annual Winter Fire School provided more than 230 firefighters a choice among nine short courses offering small and volunteer fire departments knowledge in locomotive emergencies, traffic incident management, fire origin and cause, and other hands-on training. A “Tailboard Talk” panel explored how past experiences can influence future decisions on the fireground.

July’s 14th Explorer/Cadet Hands-On Training Fire School offered students ages 15 to 21 from throughout the country a preview of a potential fire service career, during a four-day program of hands-on training and leadership experiences in Champaign. Between rounds of training, students learned the science of firefighting at a fire dynamics roundtable and cooled off with a waterball/waterbarrel competition.

IFSJ’s fall and spring Fire Academies again offered healthy prospects for the future of Illinois fire service: 22 fall and 19 spring candidates participated in daily live-fire exercises. Our thanks for Motorola Solutions Foundation tuition subsidy support for Academy students.

Curriculum and Testing

Training and education that provides the means to fire marshal certification is at the core of Illinois fire service and IFSI. We take painstaking efforts to fine-tune, update and validate the classes we offer.

In fiscal year 2016, we added three new regional test sites, led the validation of six exam banks, and oversaw completion of 20 course updates. IFSI also unveiled four new classes:

- **Hazardous Materials Awareness and Operations** is a new 36-hour course in that it combined two courses into one comprehensive class. It offers firefighters, law enforcement, EMS agencies, emergency management agencies, or other first responders the basic skills needed to evaluate and work defensively at an incident involving release of hazardous materials.

- **Industrial Confined Space Rescue Operations** Level I and Level II prepare local responders to operate in a permit-required confined space rescue. The course is designed in accordance with NFPA and OSHA standards and covers federal and state regulations, use of specialized equipment, commercial entry, and retrieval systems.

- **Search Techniques for the Fireground** is designed for firefighters who may be involved in conducting primary and secondary searches of single family, multi-family, and commercial structures. This 24-hour class also focuses on victim removal procedures.

- **Traffic Incident Management** is a five-hour operations course designed for firefighters who may be called to operate at traffic incidents. The course teaches students how to operate in a safe and coordinated manner with other responder agencies to quickly clear traffic incidents from the roadway.

In addition to new courses, IFSA developed and ran a pilot Industrial Confined Space Rescue Ops Level I and II class developed for industrial clients seeking Pro Board certification. The Institute also added Instructor III, Incident Safety Officer, and Health and Safety Officer to course offerings, as well as a blended model for Instructor I and II courses.
FIELD TRAINING
CORNERSTONE TRAINING

Cornerstone courses provide practical, hands-on basic training, delivered at no cost to fire departments locally and at IFSI Regional Training Centers and fire schools via funding from the Illinois Fire Prevention Fund.

IFSI’s seven regional representatives help departments ensure that all Illinois firefighters have access to local Cornerstone training, evaluate area needs, and apply for federal grants to support training programs and equipment acquisitions. The state budget impasse impacted FY2016 Cornerstone funding, curtailed course offerings, and reduced total student numbers across regions.

- For the Northeast region, that meant 27 fewer courses than in the previous year, but, proportionately, attendance was up for the 37 classes offered vs. 2015’s 64 courses.
- The Northwest Region was able to add four new instructors and provided training in 21 of 24 counties.
- The Southern Region organized 51 Cornerstone classes serving 1246 students during the abbreviated funding period.
- The Central Region held 52 classes and reported increased out-of-state student attendance from Indiana and Tennessee.
- The Southwest Region was able to offer 85 classes, vs. 108 in fiscal 2015, but nonetheless was able to reach 1904 students and log 10,104 student hours for 2016.

STUDENT REGISTRATIONS
BY LOCATION

11,874 student registrations at IFSI’s Champaign campus
50,876 student registrations at Regional Training Centers and local departments – an 11 percent increase over last year

More than 80 percent of IFSI training is delivered at local fire departments and Regional Training Centers throughout the state.

CORNERSTONE DELIVERY

- 391 classes
- 698 departments
- 9059 students

ILLINOIS PETROLEUM RESOURCES BOARD
OIL WELL FIRE TRAINING

- 1 class
- 6 departments
- 21 students

ILLINOIS DEPARTMENT
OF NATURAL RESOURCES
WILDLAND TRAINING

- 20 classes
- 62 departments
- 329 students

ILLINOIS PROPANE
EDUCATION AND
RESEARCH COUNCIL
(IPERC) TRAINING

- 68 classes
- 336 departments
- 1832 students
TRAINING FIREFIGHTERS WHERE THEY LIVE AND WORK

IFSI connects with Illinois firefighters through our statewide network of Regional Training Centers. The Centers make it possible for firefighters to receive quality training close to their home departments. Facilities range from burn structures to rescue and HazMat training props funded through the Illinois Terrorism Task Force.

NOTABLE ACCOMPLISHMENTS

• Trained 5056 students in 235 classes.
• Finalized and published the Confined Space Rescue Field Operating Guide.
• Completed first version of the Hazardous Materials Field Operations Guide.
• Expanded outreach to industrial customers, delivering Confined Space Rescue Level II refreshers for Dynegy in Sparta and Phillips 66 at the Wood River refinery, and Confined Space Rescue and Trench Rescue training at the annual Phillips 66 Rescue School in September 2015.
• Delivered courses to a variety of private and public organizations.
• Partnered with PARATECH in development of an elevator door frame rescue anchoring system.
• Provided Elevator Rescue Rigging training for 24 students with the Great Lakes Navy Fire Department.

WILDLAND FIREFIGHTING HIGHLIGHTS

The frequency and severity of wildland fires has created a critical need for realistic and hands-on wildland training for firefighters. Through a grant from the Illinois Department of Natural Resources, IFSI continues to offer wildfire training at no cost to firefighters who serve a population base of 10,000 or less. Last year, the Wildland program delivered training to 329 students.
REACHING OUT WITH SOCIAL MEDIA

IFSI expanded its use of Facebook and Twitter as marketing and communication tools. Our Facebook page – www.facebook.com/fsi.illinois.edu – is constantly updated with class information, photos, news and recognition of donors. The page also features comments from students. Facebook now has more than 9174 Likes.

LEARNING AT A DISTANCE

IFSI offers 18 online classes and courses on the IFSI Virtual Campus. In keeping with IFSI’s strategic priority, we have expanded distance learning, making it available for all firefighters.

SPECIAL OPERATIONS TRAINING PROGRAM

IFSI’s special operations training program encompasses technical rescue training associated with trench, rope, collapsed and confined spaces, as well hazardous materials. In FY2016, student attendance in refresher classes nearly tripled.

STUDENTS BY SPECIAL OPERATIONS TRAINING PROGRAM

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZMAT AWARENESS</td>
<td>20.45%</td>
</tr>
<tr>
<td>HAZMAT REFRESHER/OPS/TECH/IMS</td>
<td>72.99%</td>
</tr>
<tr>
<td>ROPE OPS/TECH</td>
<td>2.03%</td>
</tr>
<tr>
<td>TRENCH OPS/TECH</td>
<td>1.67%</td>
</tr>
<tr>
<td>STRUCTURAL COLLAPSE</td>
<td>0.68%</td>
</tr>
<tr>
<td>CONFINED SPACE</td>
<td>1.97%</td>
</tr>
<tr>
<td>TRT REFRESHER</td>
<td>0.20%</td>
</tr>
</tbody>
</table>

eLearning FY2016 HIGHLIGHTS

- Implemented a new online class: Traffic Incident Management Awareness.
- Started offering Hazardous Materials Operations in a blended format.
- Named Henry Gruba eLearning Program Manager. Gruba has been a part of the eLearning instructional staff since its inception in 2000.

IFSI WEBSITE

In 2016, IFSI’s web site continued to be the engine behind class discovery, registrations, research results, as well as the portal for online classes. Visitors from around the globe accessed the web site to learn more about IFSI and the classes offered.

- 14,563,863 hits, including 11,979,351 unique visitor hits
- 39,791 average hits per day
- 5,261,430 total page views
- 14,375 average page views per day
- 442,044 total visitors, from the U.S. and abroad
- 146,940 total unique IP addresses
Research is a key component in providing firefighters the best protection in the hot and hostile environments where they work. Fiscal year 2016 was a stellar year for IFSI – continuing our leadership in firefighter life-safety research. Our research efforts include addressing critical firefighter health and equipment issues. The Institute focuses on action-oriented studies that have a direct impact on firefighters’ work, health, and safety. IFSI research, adjacent to IFSI’s live-fire training structures, provides state-of-the-art facilities and equipment for advanced studies, offering researchers immediate access to tested materials for laboratory analysis. Research projects also are carried out at partner facilities on and off campus. Institute researchers collaborate with UL, the National Institute of Standards and Technology, the National Institute for Occupational Safety and Health (NIOSH), the University of Illinois, and other universities on a wide range of interdisciplinary investigations. Recent IFSI collaborations brought together through the U.S. Department of Homeland Security have included universities from North Carolina to Arizona to New York, and others well beyond Illinois’ borders.

INFOgraphic

IFSI research projects address key concerns including:

- Heat stress and cardiovascular strain due to firefighting activities
- Psychological and cognitive function effects of heat stress
- Biomechanics of movement following firefighting and wearing personal protection equipment (PPE)
- Fireground chemical exposures, particularly focused on cancer risks
- Human factors and ergonomics of firefighting and firefighting equipment
- Firefighting PPE design and materials testing
- Combustion science and diagnostics

IFSI researchers describe a technique for using a smart phone for firefighters to discover the extent of heat damage done to face pieces. With this knowledge, firefighters are better prepared to know when to replace equipment. A link to the video can be found on the IFSI Research web page.
FY16 RESEARCH HIGHLIGHTS

- Awarded a $1.5 million Department of Homeland Security (DHS) Fire Prevention and Safety Grant to study Firefighter Exposures on Today’s Fire Ground and Training Ground. Additional DHS-funded projects include sub-awards from UL to study training fire scenarios and from NYU-Polytechnic to translate IFSI cardiovascular research to its ALIVE (Advanced Learning through Integrated Visual Environments) firefighter training platform.

- Completed data collection on the Firefighter Exposures on Today’s Fire Ground and Training Ground in June 2016, including firefighters from Illinois, Indiana, Massachusetts, Georgia, New York, South Dakota, Texas, Virginia, and Wisconsin, with broad coverage from national Fire Service media outlets.

- Completed a National Institute of Standards and Technology (NIST) research project to study the effects of repeated thermal exposures on SCBA face pieces, to determine potential damage or failure risks and a NIOSH-funded study focused on firefighter noise exposure.

- Received a follow-up project from NIST to study off-gassing chemicals that may be released when plastics are heated from SCBA face pieces in fire conditions.

- Research findings published or were accepted for publication in seven leading peer-reviewed journals.
IFSI RESEARCH RESULTS ARE FEATURED IN PEER-REVIEWED JOURNALS.

IFSI manuscripts were published or went to press in the following academic journals during fiscal year 2016:

- *American Journal of Cardiology*
- *Annals of Occupational Hygiene*
- *Applied Ergonomics*
- *Ergonomics*
- *Exercise and Sports Science Reviews*
- *Fire Technology*
- *Medicine and Science in Sports and Exercise*

Research results written by senior staff were also published in fire service industry publications. “The Fire and Emergency Services Culture: Can It Be Changed?” appeared in *Fire Engineering*.

OUR RESEARCH HAS BEEN PRESENTED AT NATIONAL AND INTERNATIONAL SCIENTIFIC AND FIRE SERVICE CONFERENCES, INCLUDING:

- American College of Sports Medicine Annual Meeting
- Boston Health and Safety Symposium
- Fire Department Instructors Conference (FDIC)
- Firehouse World
- Firefighter Cancer Support Network meeting
- Future Directions in Cardiovascular Research for the U.S. Fire & EMS Service
- National Fallen Firefighters Foundation (NFFF) Cardiovascular Summit
- NFFF Research Agenda Symposium
- NFFF Technology Summit
- Redmond Symposium
- Society of Fire Protection Engineers Annual Conference
- Fire Rescue International (FRI)
- IAFF Redmond Symposium
- NIST Fire Fighting Technology Research Seminar

Results of IFSI research are shared via a live broadcast by Fire Engineering staff.
**FACILITY UPGRADES/PROPS**

- Added more truck exercises to existing props.
- Expanded live props to include a garage, porch, and a fire-behavior can for the purpose of burning normal household materials including furniture and mattresses. This can is used strictly as a fire behavior prop that shows students how regular material burns under real-world conditions.
- Improved IFSI’s Railroad Prop. Canadian Pacific Railroad added more flammable liquid pans that were tested with great success at Fire College.
- Constructed a 150-foot-long, bi-level roadway bridge collapse prop, including autos, with breaching and shoring areas.
- Constructed a two-story single family home prop, used for collapse shoring/search and rescue.
- Upgraded air compressor fill stations.
- Added 40 portable radios – a gift from Motorola – to expand the number of radios and channels available to meet growing demand.
- In FY16, IFSI took delivery of a 1990 Spartan/FMS engine with GPM pump and a five-man cab. The North Palos Fire Protection District donated the apparatus.
LIBRARY AND INFORMATION SERVICES

The IFSI Library is the only library in the state dedicated to fire and emergency services, and is the third largest in the United States. Its growing collection of up-to-date materials is available to institute staff, firefighters, and other emergency responders, and University of Illinois students. The Library’s vast storehouse is a vital informational/educational resource for firefighters regardless of their department type.

FY2016 HIGHLIGHTS:

• Named for the second year as a finalist for the Institute of Museum and Library Services’ National Medal of Honor for Museum and Library Service.
• Answered 4219 reference requests.
• Conducted 50 user training workshops for 757 patrons, including 33 class workshops.
• Provided 506 in-depth searches for program directors and instructors.
• Provided 3035 views of IFSI Library-created online subject guides or “LibGuides.”
• Cataloged and tracked 131 publisher-donated items, ensuring that these valuable resources are properly accounted for and available to IFSI instructors and staff.

The IFSI Library maintains the Illinois Firefighter Medal of Honor and Medal of Valor database as well as the Illinois Firefighter Line of Duty Deaths Database (IFLODD), the most comprehensive collection of Illinois statistics and the only firefighter database with incident summaries, photos and oral history interviews.

Available on the IFSI website, the IFLODD database had 6547 unique visitors in fiscal 2016. Its offerings include:

• 876 firefighter records
• 673 incident summaries
• 449 images
• 14 oral history interviews

The library is part of the 21,000-square-foot Learning Resource and Research Center (LRRC).

ALSO INCLUDED IN THE LRRC:

Firefighter Memorial Hall honors more than 850 Illinois firefighters who died in the line of duty since 1857 and houses permanent and temporary exhibits related to fire service history. Included is a steel beam fragment from the World Trade Center – Twin Towers.

Memorial Plaza is the brick walkway surrounding the main entrances to the LRRC and Memorial Hall. The Plaza is lined with bricks donated by individuals, businesses and organizations and personalized with engraved messages that memorialize firefighters, honor friends and family members, and show support for the Institute’s work.

The Emergency Operations Training Center incorporates advanced technologies to simulate actual emergencies and Emergency Operations Command (EOC) scenarios. The Center is equipped and utilized as the University of Illinois’ Incident Command Post for large events and campus emergencies.
OUTREACH AND PUBLIC ENGAGEMENT

• Supported the Campus Incident Command Post nine times in FY2016.

• Assisted the Campus Automated External Defibrillator Program. IFSI identified that the campus lacked a uniform program for tracking and maintaining AEDs. With funding from the Chancellor’s office, IFSI is leading data collection and strategy development enabling the University of Illinois campus to offer a unified and expanded program that will enhance campus safety.

• Offered the Learning Resource and Research Center building for 175 outside uses, including 67 for public safety organizations and 108 for non-public safety functions.

• Served as the Advisory Committee Chair for the Pro Board. Participated in three site visits and attended four meetings to review and approve accreditations for agencies.

MOTOROLA AND IFSI: A SUCCESSFUL PARTNERSHIP

The Motorola Solutions Foundation provides voice/data technology for incident command and dispatchers, enabling commanders to track and ensure the safety of active firefighters. Motorola Solutions has helped create new opportunities by subsidizing tuition for Basic Fire Fighting/NFPA Firefighter I Academy students. Thanks to grant funding from the foundation, tuition cost for fiscal 2016 firefighters or their departments was held to $3,000 per student. IFSI’s fall 2015 and spring 2016 academies hosted a combined 41 students. Motorola also provided IFSI 40 portable radios to expand training capabilities.

U.S. Congressman Rodney Davis toured the IFSI research facilities and learned about some research being done in the state-of-the-art laboratories.
FY2016 HIGHLIGHTS

IN THE U.S.

• Sponsored Industrial Forum to introduce potential industrial training customers to what IFSI has to offer.
• Engaged legislators at an April demonstration of rope rescue.
• Sponsored Team Building Exercises for Illinois Wheelchair Basketball team, Axis Capital, and State Farm. The exercises offer participants an opportunity to see what it’s like to be a firefighter and to relate our philosophies and practices to their workplace or team. Fireground communication and “chain of command” structure can provide insights into corporate productivity improvement.
• Performed a Confined Space Program demonstration during the June Illinois Association of Fire Protection Districts conference in Peoria.
• Provided support to the North American Fire Training Directors (NAFTD), including website hosting and leading an organization-wide survey to help determine its strategic direction.

INTERNATIONAL

• Hosted the Chinese Librarians Scholarly Exchange Program for the 12th year in a row. Thirty-three librarians joined the program at the University of Illinois, then visited 14 other organizations around the U.S. The program has trained 307 librarians from 97 organizations.
• Extended IFSI HazMat Technician Training to the Hong Kong Fire Services Department for the seventh year in a row. Four officers attended September 2015 training, and six participated in May 2016.
• Offered IFSI Instructor Training I-III for two Hong Kong Fire Services Department officers in September 2015.
• During the year, Head Librarian Ruan delivered the keynote speech on the Trends of the Chinese-American Library Relations at the Ohio University Chinese Librarians Summer Institute, in addition to presenting on U.S. academic library management and development to libraries in China.
• Provided IFSI HazMat Ops Training in Huizhou, China. HazMat Ops training programs were conducted at Huizhou HazMat Training Base in July and November 2015. More than 60 Chinese emergency responders received training.
• Extensively toured China, with trips to the Pearl River Delta Emergency Training Facility, the Dunhuang Academy and Dunhuang Digital Center and the Chinese People Armed Police Forces Academy. Additionally, Dr. Lian Ruan, Director of IFSI International Programs, visited academic libraries to promote the Chinese Librarians Scholarly Exchange Program.
• IFSI wrapped the year with a tour to visit libraries, attend the IFSI China HazMat training program in Huizhou, and to accompany Director Mortenson to Hong Kong Fire Services Department, Jinan University, and Huizhou HazMat Training Base, in order to expand the IFSI role in China.

Leadership from industrial customers visited IFSI to view training resources and to offer ideas on how the Institute could help meet their needs.
EXPANDING COLLABORATION WITH THE CHICAGO FIRE DEPARTMENT

One of IFSI’s most successful collaborations has been with the Chicago Fire Department (CFD). In fiscal 2016, the institute continued to expand training opportunities for CFD firefighters in the city and on the Champaign campus, along with leadership courses for more of the department’s command-level responders.

With an office in the CFD Quinn Academy, the primary responsibility of IFSI’s Associate Director for Chicago Metro Region is the Chicago Fire Department, with secondary oversight of Regional Training.

HIGHLIGHTS

- Registered 3167 Chicago Fire Department members for IFSI training.
- Conducted promotional training/education for 126 lieutenants, 42 captains, 28 battalion chiefs, 48 paramedics-in-charge, 8 ambulance commanders and 11 paramedic field chiefs.
- Partnered with the Cook County Department of Homeland Security to bring IFSI training to western Cook County.
- Provided instructional services for Nicor Gas’ annual Fire School.
- Conducted training for ExxonMobil for the company’s Fire Brigade and Rescue Team.

Leadership Development and Decision Making Training

Three years ago, a number of Illinois fire service leaders challenged Director Royal P. Mortenson to develop a program that would institutionalize leadership development and decision making in the fire service. Director Mortenson saw the challenge as an opportunity to develop a one-of-a-kind, “cradle to grave” education program for firefighters, fire officers, and chief officers.

After countless hours of curriculum development and multiple conceptual pilot programs, the Leadership Development and Decision Making (LDDM) Program was ready for full delivery. In March 2016, the first full program was successfully delivered to 10 chief officers, 13 fire officers, and 12 firefighters. LDDM “lines of education” focus on leadership and followership; history and traditions; communications; morals and ethics; professional development/tactics, techniques, and procedures; decision making and critical thinking; and command climate and culture.

Based on student feedback, the LDDM Program offers a tremendous learning opportunity which fosters experiential learning well beyond initial expectations. LDDM Instructors continue to work on their ability to deliver this highly interactive, unique program, through an intensive Instructor Development Program.
IFSI’s many strategic partnerships allow us to share knowledge and resources with leading educators, researchers, corporations, professional associations and other organizations.

**Current partners and their contributions include:**

- **Illinois Fire Chiefs Association** – support of leadership curriculum development.
- **Illinois Firefighters Association** – funding and delivery of CD training software for use by local fire departments.
- **Illinois Association of Fire Protection Districts** – participation in trustee programs to promote training opportunities and availability, plus financial support for classes.
- **Illinois Propane Education and Research Council (IPERC)** – delivery of no-cost training in fighting propane fires.
- **Illinois Petroleum Resources Board** – funding for training to extinguish oil-well fires in southern Illinois.
- **Illinois Department of Natural Resources** – training for firefighters and others to respond to extensive and specialized fires in a wildland or urban environment and to qualify for red-card certification.
- **University of Illinois at Urbana-Champaign** – cross-campus initiatives to support interdisciplinary research and academic programs.
- **Office of the State Fire Marshal** – funding support through the Fire Prevention Fund and state certification of firefighters.
- **State of Illinois Fire Caucus** – cooperative work on strategic public policy issues.
- **Underwriters Laboratories** – joint sponsorship of fire-related research and product field trials.
- **Chicago Fire Department (CFD)** – projects in four key areas: training, education, research, and translating “science to the street.” CFD is also a partner with IFSI in research projects with Underwriters Laboratories.
- **Illinois Fire Services Association** – support and advocacy for IFSI’s mission and statewide reach.

---

**Four Ways to Give**

Four funds have been established to support the delivery of firefighter training at IFSI.

The **IFSI Fund** is a general-use fund for training, education and instructional services.

The **Ag Rescue Training Fund** is an endowed fund that directly supports the agriculture rescue curriculum.

The **Firefighter Life Safety Research Fund** is an endowment that supports human and equipment applied research.

The **Learning Resource and Research Center Fund** supports the physical aspect of the library, research laboratories and Firefighters Memorial Hall, as well as the outside Memorial Plaza.

IFSI takes pride in guaranteeing that 100 percent of all donations are used to directly support our firefighter training, research, and education programs.

**Funding Sources**

- **Endowments and Monetary Gifts** 8.17%
- **Other Income** 3.63%
- **Grants (Research)** 10.61%
- **Grants (Federal)** 20.33%
- **Courses (Includes Student Fees)** 20.84%
- **Cornerstone** 6.02%
- **FIRE PREVENTION FUND** 30.40%
- **COURSES** 30.40%

---

**Funding Sources**

IFSI takes pride in guaranteeing that 100 percent of all donations are used to directly support our firefighter training, research, and education programs.
FEMA GRANT REFRESHES RESOURCES

Assistance to Firefighters Grant funding enabled IFSI last year to replenish vital training gear and resources. Grants are provided by the Federal Emergency Management Agency, under the Department of Homeland Security, and were expanded in 2014 to include state fire academies. IFSI’s AFG grant was applied toward 50 sets of personal protection equipment, including turnout coats and pants, hoods, gloves, helmets, and boots; a wearable Advanced Sensor Platform; a self-contained breathing apparatus (SCBA) fill station; 25 SCBAs; and hoses and ladders.
ADMINISTRATION

Royal P. Mortenson  
Director  
(217) 333-3800  
rpmort@illinois.edu

Jim Keiken  
Deputy Director  
(217) 300-4275  
jkeiken@illinois.edu

John (Mac) McCastland  
Associate Director  
(708) 906-6927  
jmccastl@illinois.edu

Brian R. Brauer, Ed.D.  
Associate Director  
(217) 333-9027  
brbrauer@illinois.edu

Sheri Ellenberger  
Associate Director of Business & Finance  
(217) 300-5831  
ellenber@illinois.edu

Terri Hopper  
Executive Assistant to the Director and Director of Class Support  
(217) 244-7131  
hopper@illinois.edu

Gavin Horn, Ph.D.  
Director of Research  
(217) 265-6563  
ghorn@illinois.edu

Sean Burke  
Assistant Director in charge of Firefighting Programs  
(773) 737-0766  
swburke@illinois.edu
Illinois Fire Service Institute’s mission:
To help firefighters do their work through training, education, information, and research.