Wednesday, May 9, 2018, 8:30 – 10:00 am

Bob Davies, *Peak Performance Motivational Keynote Speaker*

Since 1983, Bob Davies has used his considerable personal and professional experience as a leader to help people around the country become more confident and more productive. As a keynote speaker, author, trainer and coach, Mr. Davies has drawn upon the lessons he has accumulated, from his humble childhood roots to his successful career as a college football coach, to develop a system for improving lives based on clarity, focus and accountability.

Wednesday, May 9, 2018, 10:30 – 12:00 pm

*The Joint Commission: Survey Process, Methods, and Update*

James Kendig, MS, CHSP, CHCM, CHEM, LHRM

*Field Director, Surveyor Management and Development Accreditation and Certification Operations*

*Life Safety Code Surveyors/Engineers, The Joint Commission*

James Kendig is the Field Director for the Life Safety Code Surveyors/Engineers at The Joint Commission. In this role, he oversees half (approximately 40) of the surveyor cadre who specialize in surveying The Joint Commission’s life safety, environment of care, and emergency management standards.

*DNV GL Healthcare: Quality-driven Accreditation and Clinical Excellence Certifications*

Kelly Proctor, *Physical Environment Sector Leader, DNV-GL Healthcare*

Kelly is currently employed as a Physical Environment Sector Leader and a Lead Surveyor for DNV-GL Healthcare. Kelly has performed over 450 surveys for DNV-GL and has surveyed hospitals all over the United States, South America, Europe and Asia for DNV-GL.
### EDUCATIONAL SESSIONS
**WEDNESDAY, MAY 9, 2018, 2:00 – 3:00 PM**

#### EDU Option 1: NFPA80—What’s Required in the 11 Point Fire Door Inspection

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<tr>
<th>Tyler Bragg</th>
<th>Vice President of Operations, Midwest Firestop, Inc.</th>
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In this class, we will briefly review NFPA 80 and the requirements under 11-point inspection. We will examine certain parts of the code that define who can perform an inspection, what is involved in the 11-Point of the inspection, what are some items that may be “grandfathered” in, and who has the ultimate say on whether the door passes inspection or not. We will give you some field examples of the more common deficiencies that are being discovered. We will conclude with a brief question and answer time.

#### EDU Option 2: Emergency Power for Healthcare

<table>
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<tr>
<th>John Rimbey</th>
<th>Associate Partner, Syska Hennessy Group</th>
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<tr>
<td>Rob Grubbs, Senior Associate, Syska Hennessy Group</td>
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Emergency power systems for healthcare facilities have been with us for generations but they tend to be commonly misunderstood and underappreciated. Other critical facility industries tend to have much more robust and reliable emergency systems compared to many hospitals. This presentation explains some of the basic requirements for a healthcare compliant emergency power system but also explores what we can learn from other industries, particularly data centers, that help healthcare groups increase reliability, reduce risk, and minimize costs associated with emergency power systems. The challenges in providing fuel for these emergency systems, including location of storage tanks and maintaining the purity of the fuel, will also be discussed.

#### EDU Option 3: How UV-C Can Reduce HVAC Energy, Maintenance Costs and Improve IAQ

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<thead>
<tr>
<th>Lorrie Todd</th>
<th>Southern Regional Manager, UV Resources</th>
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This talk briefly describes what UV-C technology is and how it’s produced. It touches on how UV-C has been used for nearly 100 years to destroy microorganisms on surface and in the air. Also, it will illustrate how UV-C is currently used to provide a “Green,” non-chemical method of stripping dirt and grime from coil and drain pan surfaces without residue. Users and their comments will be provided along with the simple methods used to validate their aging systems return to near new performance. Suggestions will be made on how to take advantage of this increased performance to save energy.

#### Educational Option 4: Entropy and the Exploding Hospital

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<tr>
<th>Rolf Haarstad</th>
<th>Senior Vice President, CRGA Design</th>
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Broadly defined, entropy is the degree of disorder or uncertainty in a system. The old model hospital represented a highly ordered and certain system. It supported an institutionalized, generalized and repeatable experience in one large entity. Changes in models of care, reimbursement strategies and—most importantly—patient safety/comfort have caused an entropic explosion of that entity. Consider the cleaving into inpatient and outpatient units; the breakdown of outpatient services to same-day surgery, clinics, emergent care, etc.; the dispensation of outpatient care to satellite hubs, mobile units and home care-- and now, the advent of “smart beds” that take vitals at home; clothing that monitors heart rate and blood sugar; pills for digital monitoring of prescription dosages and embedded chips providing comprehensive diagnostic information. The dispersal of healthcare from the public realm of institutional space to the scattered private realm of personal...
Facility Management teams in healthcare settings are tasked with a multitude of responsibilities to ensure the safety, health, and well-being of patients, staff, and other building occupants, while adhering to the standards set by The Joint Commission (TJC). In 2012, TJC adopted the 2012 editions of the National Fire Protection Association’s NFPA 101: Life Safety Code, and NFPA 99: Health Care Facilities Code. In November of 2016, The Joint Commission took a deeper dive into these codes and made revisions that take effect January 1, 2018. One of these key revisions is specific to minimizing and containing fire and smoke, and makes numerous references to NFPA 90A, being the “Standard for the Installation of Air Conditioning and Ventilating Systems”, which outlines the stringent compliance requirements for any product or supplementary material exposed to the air stream within an HVAC System.

It is important to understand the intended purpose of NFPA 90A and why it exists, which is to restrict the spread of smoke through air duct systems within a building or into a building from the outside, as well as restrict the spread of fire through air duct systems from the area of fire origin. When the fire of origin is an air handling unit, for example, the risk to building occupants from rapid smoke spread is significantly compounded when non-compliant coatings and materials have been used to repair or maintain the air handlers – a common but dangerous practice. Common because these materials have a Class A fire rating, leading to the assumption that these materials are compliant. Dangerous because they are not.

This presentation will educate attendees about the importance of NFPA 90A and why it’s the law, as well as outline common practices specific to air handling unit repair and maintenance that are not compliant with TJC or NFPA 101: Life Safety Code (of which NFPA 90A is a part). Mike will also share some NFPA data specific to hospitals, as well as our own first-hand knowledge and pictures evidencing fires originating from commercial HVAC equipment. Lastly, Mike will provide attendees with educational resources specific to NFPA 90A and solutions, such as AQUIS, that fully comply with this standard - and why.
### EDU Option 6: Smart Portfolio Management Using Enterprise GIS

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<th>Name</th>
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<tr>
<td>William Wingfield</td>
<td>Senior Consultant, R&amp;K Solutions</td>
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<tr>
<td>Scott Blankenship</td>
<td>Director, Facility Support, Carilion Clinic</td>
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Organizations are increasingly turning to Enterprise Geographic Information Systems (EGIS) to overcome the challenges associated with using the wide array of different facilities data to more effectively manage facilities portfolios and quickly acquire information to make smarter decisions. An EGIS may be used to consolidate spatial and non-spatial data to better manage diverse information such as space, operations, maintenance, energy, capital investments and more. This presentation will use a case study of a real-world implementation to illustrate how an EGIS is used to improve sustainability, make wise investment decisions and improve the bottom line. Trusted data is the foundation for confident decision-making. The presentation will describe how standards and processes were established and improved to produce consistent, accurate data. Participants will learn how the collected data was integrated into the EGIS. Examples of the resulting spatial and non-spatial data integration, aggregation and analysis will be shared. The presentation will illustrate how different types of data and systems were integrated, and how the data was aggregated and analyzed to guide decision-making and improve performance.

### EDU Option 7: Co-Generation: A Double Bonus-Energy Conservation and Resiliency

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<th>Name</th>
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<tr>
<td>Robert L. Cox, P.E.</td>
<td>Director, Commissioning and Energy-Global Building Jacobs</td>
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The seminar will show the significant potential benefits of using Co-Generation systems technology to reduce annual utility usage and expenditures especially with low natural gas current prices and future projections. The seminar based on a case study with Renown Healthcare's main Healthcare Campus will show how to evaluate if these systems may have an attractive Return on Investment for your campus and ill. The seminar will also demonstrate how these systems provide additional reliability and redundancy for healthcare electrical, heating, and cooling needs especially in the light of utility outages, global warming, and increased weather events like Hurricane Harvey, Irma, and Maria.

### EDU Option 8: Accommodating Behavioral Health Patients in the Emergency Department: An In-Depth Look at Safety Risk, Treatment and Patient Comfort

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<tr>
<td>Belinda Currin, AIA,</td>
<td>ACHA, CHFM, CHC, NCARB, Currin Design</td>
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<tr>
<td>Rick Sanders</td>
<td>CHFM, CHEP, CCHM, Plant Operations Manager, VCU Health System</td>
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This learning session will look at the evaluation and minimization of Risk within Hospital’s Emergency Department regarding the Triage, Treatment and Processing of behavioral health patients. The overall focus will be on elements contributing to Risk of Self-harm, harm to others and providing a durable, yet comfortable environment of Emergency Treatment for the patient. Planning for treatment/accommodation of multiple acuity levels, containment/minimization of elopement, separation from other patient populations to reduce additional incidents, the applicability of the 2012 Life Safety Code (locking requirements) and FGI 2014 (observation room provisions) will be addressed.
**EDU Option 9: Understanding Regulatory Codes**

Understanding regulatory codes is essential for proper maintenance of a health care facility. Recent editions of the codes have introduced new requirements that can ease the difficulties of maintaining a facility, if used properly. This session serves to reinforce knowledge of long-standing requirements, while providing an introduction to new principles.

Audience members will be asked to respond to a series of multiple-choice questions regarding the requirements of several NFPA codes, including but not limited to NFPA 101®, *The Life Safety Code®* (2012 and 2015 Editions); NFPA 72: National Fire Alarm and Signaling Code (2010 Edition); and NFPA 99: Health Care Facilities Code (2012 Edition). The number of participants for each question would be displayed during the presentation, along with the percentage of correct responses. A low percentage of correct responses would trigger an explanation of the code requirement in addition to an open discussion with participants. If the percentage of correct responses is high, the participants would be simply be provided with the correct answer and code reference. The questions will be asked one at a time, allowing a focused discussion without a hard time constraint. This interactive lecture format allows content to be customized to the needs of participants based on the responses to the questions posed. If not all the questions are addressed during the presentation, a list of questions, answers and referenced code sections will be electronically distributed to the participants.

While most questions will be from NFPA 101, NFPA 72, and NFPA 99, some questions from other Codes (i.e. NFPA 10, NFPA 80, and NFPA 105) will also be included. The open discussion will encompass background justification of changes to specific requirements and examples of requirements applied in the health care industry. Questions regarding NFPA 101 will address both new and existing construction.

The attendees will be actively engaged with the participatory lecture by answering questions one at a time. A low percentage of correct responses would trigger an explanation of the code requirement in addition to an open discussion with participants. If the percentage of correct responses is high, the participants would be simply provided with the correct answer and code reference.
**EDU Option 10: When Good Buildings Go Bad – Recognition, Evaluation, and Control of Building Indoor Air Quality Issues**

Christopher J. Chapman, CIH  
Director of Industrial Hygiene  
ECS Mid-Atlantic

Benjamin Meyer, AIA, LEED AP  
Principal Architect,  
Facilities Building Envelope  
ECS Mid-Atlantic

This will be a joint presentation on recognizing and solving indoor air quality issues in the medical environment. The speakers will be Mr. Christopher Chapman, CIH and Mr. Benjamin Meyer, RA, LEED AP. The first part of the presentation will focus on identifying and sampling for some common (and not so common) indoor air quality problems/issues. The latest testing protocols for mold/moisture will be discussed as well as sampling for silica, dust sampling as part of monitoring for construction projects in hospital, and sampling for anesthetic gasses. The second part of the presentation will look at causes of indoor air quality issues related to the building enclosure. The building enclosure is typically designed for the life of the building, making it critical to address its performance at the design phase, during construction, and through operation of the building. Building enclosure attributes include energy efficiency, durability, IAQ and material selection. Unfortunately, some energy efficient enclosure designs while code-compliant, may adversely impact durability and result in unintended consequences for IAQ over the life of the building. Even green standards, such as LEED and IgCC lack sufficient measures to ensure long-term durability of the wall assembly. This presentation will review recent changes in energy codes, examples of code compliant building enclosures and their potential moisture and durability challenges, as well as design tools that could be used to assess potential moisture problems to design and operate energy efficient and durable building enclosures.

**EDU Option 11: Five Questions Owners Should Ask About Their HVAC Design**

David J. Barto, PE,  
CHC, CHFM, LEED AP  
Director, Facilities Planning & Construction  
Penn State Milton S. Hershey Medical Center  
Penn State College of Medicine

Few facility owners are also experts in mechanical engineering. It can be overwhelming when an engineer rolls open a set of technical drawings and attempts to describe the details of a proposed heating, ventilating, and air-conditioning (HVAC) for your project. Engineers and Owners should have the same overall project goals, but don’t always understand each other’s priorities or speak the same language. Engineers tend to focus on the “nuts-and-bolts of the system”, while Owners need to be concerned about the bigger picture. The good news is that you don’t have to know the difference between a venturi air valve and a calibrated balancing valve in order to evaluate the HVAC system a professional is proposing for your project. There are five questions that anyone can ask to quickly steer the discussion to what is truly important to the facility owner without getting bogged down in technical details. These five questions will cut to the chase and help the team understand cost, energy consumption, maintenance, and impact to operations of any proposed HVAC system. This presentation is designed for the owner who does not have a detailed knowledge of HVAC and mechanical systems but is responsible for the implementation and results of healthcare construction and renovation projects of all sizes. The presentation can also provide architects and engineers an Owner’s perspective and what questions they should be prepared for when presenting designs.
The Emergency Department is often a hospital’s chance to make a first impression on a potential patient. Despite this, the Emergency Department is often viewed as a utilitarian space designed for high abuse and many Emergency Departments go without renovation for long periods. The continuous operation, logistical challenges, and perceived cost of phased renovation can turn many hospital operators off of an ED renovation or expansion. Implementation of the ACA has generally resulted in an expansion of those coming to the ED with insurance but has not precipitated a reduction in ED utilization through a shift to primary care. Continued instability in the insurance marketplace will likely undermine the long-term cultural shifts necessary to reduce ED volume. Our presentation will address current trends in ED utilization and design as well as challenges and solutions to the design and construction/renovation process. Through case studies we will provide hospital operators, construction managers, and designers with a tool kit that will be immediately applicable to upcoming ED renovation or expansion projects.