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SANS LOS ANGELES Long Beach, CA

July 10-15, 2017

PROTECT YOUR COMPANY AND ADVANCE YOUR CAREER
WITH HANDS-ON, IMMERSION-STYLE

INFORMATION SECURITY TRAINING

TAUGHT BY REAL-WORLD PRACTITIONERS

Six courses in:

CYBER DEFENSE
INCIDENT RESPONSE
DIGITAL FORENSICS
ETHICAL HACKING
SECURITY MANAGEMENT

"This training has well-organized, professional material that is presented by industry experts with real-world experience. Outstanding!"
-Dennis Allen, SEI Investments Company

GIAC CERTIFICATIONS
GIAC-Approved Training

SAVE $400
Register and pay by May 17th – Use code **EarlyBird17**

www.sans.org/long-beach

SANS Instructors

SANS instructors are real-world practitioners who specialize in the subjects they teach. All instructors undergo rigorous training and testing in order to teach SANS courses. This guarantees that what you learn in class will be up to date and relevant to your job. The SANS Long Beach 2017 lineup of instructors includes:

Matt Bromiley
Instructor
@mbromileyDFIR

Chris Christianson
Instructor
@cchristianson

Christopher Crowley
Principal Instructor
@CCrowMontance

G. Mark Hardy
Certified Instructor
@g_mark

Michael Murr
Principal Instructor
@mikemurr

My-Ngoc Nguyen
Certified Instructor
@MenopN

J.D. Wegner
Instructor
@jdwegner

Evening Bonus Sessions

Take advantage of these extra evening presentations and add more value to your training. Learn more on page 8.

KEYNOTE: ***Tools and Techniques for Assessing Suspected Android Malware***
Chris Crowley

Anti-Ransomware: How to Turn the Tables
G. Mark Hardy

The Red Pill. Become Aware: Squashing Security Misconceptions and More
My-Ngoc Nguyen

Save $400 when you register and pay by May 17th using code EarlyBird17

Courses at a Glance

	MON 7-10	TUE 7-11	WED 7-12	THU 7-13	FRI 7-14	SAT 7-15
SEC301 Intro to Information Security	Page 2					
SEC401 Security Essentials Bootcamp Style	Page 3					
SEC504 Hacker Tools, Techniques, Exploits, and Incident Handling	Page 4					
FOR508 Advanced Digital Forensics, Incident Response, and Threat Hunting	Page 5					
MGT512 SANS Security Leadership Essentials for Managers with Knowledge Compression™	Page 6					
MGT517 Managing Security Operations: Detection, Response, and Intelligence	Page 7 *NEW!*					

SANS Training Formats

Whether you choose to attend a training class live or online, the entire SANS team is dedicated to ensuring your training experience exceeds expectations.

Live Classroom Instruction

Premier Training Events

Our most recommended format, live SANS training events feature SANS' top instructors teaching multiple courses at a single time and location. This allows for:

- Focused, immersive learning without the distractions of your office environment
- Direct access to SANS Certified Instructors
- Interacting with and learning from other professionals
- Attending SANS@Night events, NetWars tournaments, vendor presentations, industry receptions, and many other activities

Our premier live training events in North America, serving thousands of students, are held in Orlando, Washington DC, Las Vegas, New Orleans, and San Diego. Regional events with hundreds of students are held in most major metropolitan areas during the year. See page 12 for upcoming Training Events in North America.

Summits

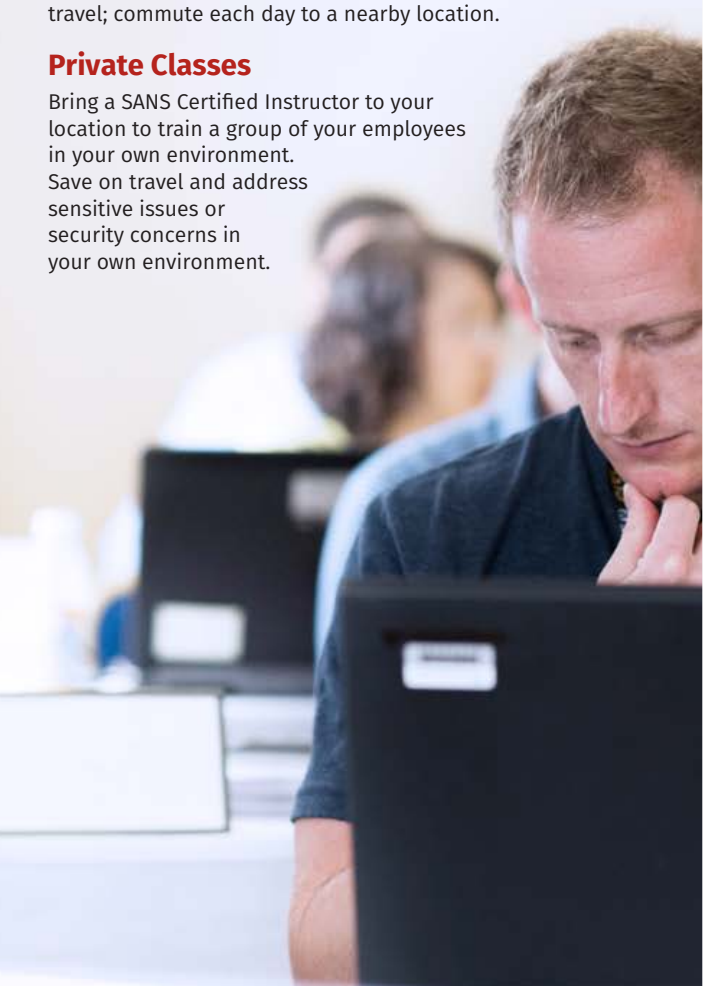
SANS Summits focus one or two days on a single topic of particular interest to the community. Speakers and talks are curated to ensure the greatest applicability to participants.

Community SANS Courses

Same SANS courses, courseware, and labs, taught by up-and-coming instructors in a regional area. Smaller classes allow for more extensive instructor interaction. No need to travel; commute each day to a nearby location.

Private Classes

Bring a SANS Certified Instructor to your location to train a group of your employees in your own environment. Save on travel and address sensitive issues or security concerns in your own environment.



Online Training

SANS Online successfully delivers the same measured learning outcomes to students at a distance that we deliver live in classrooms. More than 30 courses are available for you to take whenever or wherever you want. Thousands of students take our courses online and achieve certification each year.

Top reasons to take SANS courses online:

- Learn at your own pace, over four months
- Spend extra time on complex topics
- Repeat labs to ensure proficiency with skills
- Save on travel costs
- Study at home or in your office

Our SANS OnDemand, vLive, Simulcast, and SelfStudy formats are backed by nearly 100 professionals who ensure we deliver the same quality instruction online (including support) as we do at live training events.

> "I am thoroughly pleased with the OnDemand modality. From a learning standpoint, I lose nothing. In fact, the advantage of setting my own pace with respect to balancing work, family, and training is significant, not to mention the ability to review anything that I might have missed the first time."
>
> -Kevin E., U.S. Army

> "The decision to take five days away from the office is never easy, but so rarely have I come to the end of a course and had no regret whatsoever. This was one of the most useful weeks of my professional life."
>
> -Dan Trueman, Novae PLC

SEC301

Intro to Information Security

GISF Certification

Information Security Fundamentals

www.giac.org/gisf

Five-Day Program
Mon, July 10 - Fri, July 14
9:00am - 5:00pm
30 CPEs
Laptop Required
Instructors: My-Ngoc Nguyen, J.D. Wegner

"Labs reinforced the security principles in a real-world scenario."
-Tyler Moore, Rockwell

"This course was the perfect blend of technical and practical information for someone new to the field, and I would recommend it!"
-Steve Mecco, Draper

Bundle OnDemand
WITH THIS COURSE
www.sans.org/ondemand

To determine if the SANS SEC301 course is right for you, ask yourself five simple questions:

- **Do you have basic computer knowledge, but are new to information security and in need of an introduction to the fundamentals?**
- **Are you bombarded with complex technical security terms that you don't understand?**
- **Are you a non-IT security manager (with some technical knowledge) who lays awake at night worrying that your company will be the next mega-breach headline story on the 6 o'clock news?**
- **Do you need to be conversant in basic security concepts, principles, and terms, even if you don't need "deep in the weeds" detail?**
- **Have you decided to make a career change to take advantage of the job opportunities in information security and need formal training/certification?**

If you answer yes to any of these questions, the **SEC301: Intro to Information Security** training course is for you. Jump-start your security knowledge by receiving insight and instruction from real-world security experts on critical introductory topics that are fundamental to information security. This completely revised five-day, comprehensive course covers everything from core terminology to the basics of computer networks, security policies, incident response, passwords, and even an introduction to cryptographic principles.

This course is designed for students who have a basic knowledge of computers and technology but no prior knowledge of cybersecurity. The hands-on, step-by-step teaching approach will enable you to grasp all of the information presented even if some of the topics are new to you. You'll learn the fundamentals of information security that will serve as the foundation of your InfoSec skills and knowledge for years to come.

Written by a security professional with over 30 years of experience in both the public and private sectors, SEC301 provides uncompromising real-world insight from start to finish. The course prepares you for the Global Information Security Fundamentals (GISF) certification test, as well as for the next course up the line, **SEC401: Security Essentials Bootcamp Style**. It also delivers on the ***SANS promise: You will be able to use the knowledge and skills you learn in SEC301 as soon as you return to work.***

My-Ngoc Nguyen *SANS Certified Instructor*

My-Ngoc Nguyen (pronounced Mee-Nop Wynn) is the CEO/Principal Consultant for Secured IT Solutions. She brings 15 years of experience in information systems and technology, with the past 12 years focused on cybersecurity and information assurance for both the government and commercial sectors. My-Ngoc is highly experienced in IT security and risk methodologies, and in legal and compliance programs. She led a cybersecurity program under a federal agency for a highly-regulated, first-of-a-kind project of national importance. With that experience, she has been helping client organizations in both the public and private sectors implement secure and compliant business processes and IT solutions using defense-in-depth and risk-based approaches. Along with a master's degree in management information systems, she carries top security certifications that include GPEN, GCIH, GSEC, and CISSP, and is a former QSA. She is a member of the FBI's InfraGard, the Information Systems Security Association (ISSA), the Information Systems Audit and Control Association (ISACA), and the International Information Systems Security Certification Consortium (ISC). My-Ngoc founded the non-profit organization CyberSafeNV to raise security awareness among Nevada residents and is currently the organization's chairperson. **@MenopN**

J.D. Wegner *SANS Instructor*

J.D. Wegner has 40 years of experience in IT, half that spent teaching others how to excel in the industry. He describes himself as a Crypto-Geek and holds that "a little paranoia now and then is healthy." J.D. has taught over 10,000 students from industry, education, and the government how to build networks and make them more secure. He and his wife call Hickory, NC home and enjoy spending time with their grandchildren. **@jdwegner**

SEC401

Security Essentials Bootcamp Style

GSEC Certification
Security Essentials
www.giac.org/gsec

Six-Day Program
Mon, July 10 - Sat, July 15
9:00am - 7:00pm (Days 1-5)
9:00am - 5:00pm (Day 6)
46 CPEs
Laptop Required
Instructor: Chris Christianson

Who Should Attend

- Security professionals who want to fill the gaps in their understanding of technical information security
- Managers who want to understand information security beyond simple terminology and concepts
- Operations personnel who do not have security as their primary job function but need an understanding of security to be effective
- IT engineers and supervisors who need to know how to build a defensible network against attacks
- Administrators responsible for building and maintaining systems that are being targeted by attackers
- Forensic specialists, penetration testers, and auditors who need a solid foundation of security principles to be as effective as possible at their jobs
- Anyone new to information security with some background in information systems and networking

"This training answers the 'why' of my work practices, and asks the 'why not' for the practices my company doesn't follow."
-Thomas Petro, Southern California Edison

This course will teach you the most effective steps to prevent attacks and detect adversaries with actionable techniques that you can directly apply when you get back to work. You'll learn tips and tricks from the experts so that you can win the battle against the wide range of cyber adversaries that want to harm your environment.

STOP and ask yourself the following questions:

- **Do you fully understand why some organizations get compromised and others do not?**
- **If there were compromised systems on your network, are you confident that you would be able to find them?**
- **Do you know the effectiveness of each security device and are you certain that they are all configured correctly?**
- **Are proper security metrics set up and communicated to your executives to drive security decisions?**

If you do not know the answers to these questions, SEC401 will provide the information security training you need in a bootcamp-style format that is reinforced with hands-on labs.

SEC401: Security Essentials Bootcamp Style is focused on teaching you the essential information security skills and techniques you need to protect and secure your organization's critical information assets and business systems. Our course will show you how to prevent your organization's security problems from being headline news in the *Wall Street Journal*!

Prevention Is Ideal but Detection Is a Must

With the rise in advanced persistent threats, it is almost inevitable that organizations will be targeted. Whether the attacker is successful in penetrating an organization's network depends on the effectiveness of the organization's defense. Defending against attacks is an ongoing challenge, with new threats emerging all of the time, including the next generation of threats. Organizations need to understand what really works in cybersecurity. What has worked, and will always work, is taking a risk-based approach to cyber defense. Before your organization spends a dollar of its IT budget or allocates any resources or time to anything in the name of cybersecurity, three questions must be answered:

- **What is the risk?**
- **Is it the highest priority risk?**
- **What is the most cost-effective way to reduce the risk?**

Security is all about making sure you focus on the right areas of defense. In SEC401 you will learn the language and underlying theory of computer and information security. You will gain the essential and effective security knowledge you will need if you are given the responsibility for securing systems and/or organizations. This course meets both of the key promises SANS makes to our students: (1) You will learn up-to-the-minute skills you can put into practice immediately upon returning to work; and (2) You will be taught by the best security instructors in the industry.

SANS Technology Institute
www.sans.edu


www.sans.org/8140

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Chris Christianson *SANS Instructor*

Chris Christianson is an Information Security Consultant based in Northern California, with 20 years of experience and many technical certifications including the CCSE, CCDP, CCNP, GSEC, CISSP, IAM, GCIH, CEH, IEM, GCIA, GREM, GPEN, GWAPT, GISF, and GCED. He holds a bachelor of science degree in management information systems and was the Assistant Vice President in the information technology department at one of the nation's largest credit unions. Chris has also been an expert speaker at conferences and a contributor to numerous industry articles. **@cchristianson**

SEC504

GCIH Certification
Incident Handler

www.giac.org/gcih

Hacker Tools, Techniques, Exploits, and Incident Handling

Six-Day Program
Mon, July 10 - Sat, July 15
9:00am - 7:15pm (Day 1)
9:00am - 5:00pm (Days 2-6)
37 CPEs
Laptop Required
Instructor: Michael Murr

Who Should Attend

- Incident handlers
- Leaders of incident handling teams
- System administrators who are on the front lines defending their systems and responding to attacks
- Other security personnel who are first responders when systems come under attack

"SANS offers very valuable, practical training which makes it possible to return to the workplace and immediately implement improvements and strategies."
-Jill Stuart,
Reserve Bank of Australia

"SEC504 helped me put many pieces of the puzzle together."
-Ian Trimble,
Blue Cross Blue Shield

The Internet is full of powerful hacking tools and bad guys using them extensively. If your organization has an Internet connection or one or two disgruntled employees (and whose does not!), your computer systems will get attacked. From the five, ten, or even one hundred daily probes against your Internet infrastructure to the malicious insider slowly creeping through your most vital information assets, attackers are targeting your systems with increasing viciousness and stealth. As defenders, it is essential we understand these hacking tools and techniques.

"[This course is a] good foundation for security incidents. It's a must-have for security incident handlers/managers."-Wu Peihui, Citibank

This course enables you to turn the tables on computer attackers by helping you understand their tactics and strategies in detail, giving you hands-on experience in finding vulnerabilities and discovering intrusions, and equipping you with a comprehensive incident handling plan. It addresses the latest cutting-edge insidious attack vectors, the "oldie-but-goodie" attacks that are still prevalent, and everything in between. Instead of merely teaching a few hack attack tricks, this course provides a time-tested, step-by-step process for responding to computer incidents, and a detailed description of how attackers undermine systems so you can prepare for, detect, and respond to those attacks. In addition, the course explores the legal issues associated with responding to computer attacks, including employee monitoring, working with law enforcement, and handling evidence. Finally, students will participate in a hands-on workshop that focuses on scanning, exploiting, and defending systems. **It will enable you to discover the holes in your system before the bad guys do!**

The course is particularly well-suited to individuals who lead or are a part of an incident handling team. General security practitioners, system administrators, and security architects will benefit by understanding how to design, build, and operate their systems to prevent, detect, and respond to attacks.

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Bundle OnDemand
with this course
www.sans.org/ondemand

Michael Murr *SANS Principal Instructor*

Michael has been a forensic analyst with Code-X Technologies for over five years, has conducted numerous investigations and computer forensic examinations, and has performed specialized research and development. Michael has taught SANS SEC504: Hacker Techniques, Exploits, and Incident Handling; FOR508: Advanced Digital Forensics, Incident Response, and Threat Hunting; and FOR610: Reverse-Engineering Malware: Malware Analysis Tools and Techniques. He has also led SANS Online Training courses and is a member of the GIAC Advisory Board. Currently, Michael is working on an open-source framework for developing digital forensics applications. Michael holds the GCIH, GCFA, and GREM certifications and has a degree in computer science from California State University at Channel Islands. Michael also blogs about digital forensics on his forensic computing blog. **@mikemurr**

FOR508

Advanced Digital Forensics, Incident Response, and Threat Hunting

GCFA Certification
Forensic Analyst

www.giac.org/gcfa

Six-Day Program
Mon, July 10 - Sat, July 15
9:00am - 5:00pm
36 CPEs
Laptop Required
Instructor: Matt Bromiley

Who Should Attend

- Incident response team members
- Threat hunters
- Experienced digital forensic analysts
- Information security professionals
- Federal agents and law enforcement
- Red team members, penetration testers, and exploit developers
- SANS FOR408 and SEC504 graduates

"This is, by far, the best training I have ever had. My forensic knowledge increased more in the last five days than in the last year."
-Vito Rocco, University of Nevada Las Vegas

"Come prepared to learn a lot!"
-Todd Black Lee, Golden 1 Credit Union

FOR508: Advanced Digital Forensics, Incident Response, and Threat Hunting will help you to:

- Detect how and when a breach occurred
- Identify compromised and affected systems
- Determine what attackers took or changed
- Contain and remediate incidents
- Develop key sources of threat intelligence
- Hunt down additional breaches using knowledge of the adversary

DAY 0: A 3-letter government agency contacts you to say an advanced threat group is targeting organizations like yours, and that your organization is likely a target. They won't tell how they know, but they suspect that there are already several breached systems within your enterprise. An advanced persistent threat, aka an APT, is likely involved. This is the most sophisticated threat that you are likely to face in your efforts to defend your systems and data, and these adversaries may have been actively rummaging through your network undetected for months or even years.

This is a hypothetical situation, but the chances are very high that hidden threats already exist inside your organization's networks. Organizations can't afford to believe that their security measures are perfect and impenetrable, no matter how thorough their security precautions might be. Prevention systems alone are insufficient to counter focused human adversaries who know how to get around most security and monitoring tools.

This in-depth incident response and threat hunting course provides responders and threat hunting teams with advanced skills to hunt down, identify, counter, and recover from a wide range of threats within enterprise networks, including APT nation-state adversaries, organized crime syndicates, and hactivism. Constantly updated, **FOR508: Advanced Digital Forensics, Incident Response, and Threat Hunting** addresses today's incidents by providing hands-on incident response and threat hunting tactics and techniques that elite responders and hunters are successfully using to detect, counter, and respond to real-world breach cases.

GATHER YOUR INCIDENT RESPONSE TEAM – IT'S TIME TO GO HUNTING!

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Matt Bromiley *SANS Instructor*

Matt Bromiley is a Senior Managing Consultant at Kroll, a major incident response and forensic analysis firm, where he assists clients with incident response, digital forensics, and litigation support. He also serves as a SANS GIAC Advisory Board member, a subject-matter expert for the SANS Securing The Human Program, and a technical writer for the SANS Analyst Program. Matt has built a wide-ranging career that gives him a broad perspective on digital forensics. He has helped organizations of all types and sizes, from multinational conglomerates to small, regional companies. His skills run the gamut from disk, database and network forensics to malware analysis and classification, incident response/triage and threat intelligence, memory analysis, log analytics, and network security monitoring. **@mbromileyDFIR**

MGT512

GSLC Certification
Security Leadership

www.giac.org/gslc

SANS Security Leadership Essentials for Managers with Knowledge Compression™

Five-Day Program
Mon, July 10 - Fri, July 14
9:00am - 6:00pm (Days 1-4)
9:00am - 4:00pm (Day 5)
33 CPEs
Laptop Recommended
Instructor: G. Mark Hardy

Who Should Attend

- All newly appointed information security officers
- Technically skilled administrators who have recently been given leadership responsibilities
- Seasoned managers who want to understand what their technical people are telling them

"MGT512 is one of the most valuable courses I've taken with SANS. It really did help bridge the gap from security practitioner to security orchestrator. Truly a gift!"
-John Madick, Epiq Systems, Inc.

This completely updated course is designed to empower advancing managers who want to get up to speed quickly on information security issues and terminology. You won't just learn about security, you will learn how to manage security. Lecture sections are intense; the most common student comment is that it's like drinking from a fire hose. The diligent manager will gain the vital, up-to-date knowledge and skills required to supervise the security component of any information technology project. Additionally, the course has been engineered to incorporate the NIST Special Publication 800 (series) guidance so that it can be particularly useful to U.S. government managers and supporting contractors.

Essential security topics covered in this management track include network fundamentals and applications, power, cooling and safety, architectural approaches to defense in depth, cyber attacks, vulnerability assessment and management, security policies, contingency and continuity planning, awareness management, risk management analysis, incident handling, web application security, and offensive and defensive information warfare, culminating with our management practicum. The material uses Knowledge Compression,™ special charts, and other proprietary SANS techniques to help convey the key points of critical slides and keep the information flow rate at a pace senior executives demand every teaching hour of the course. The course has been evaluated and approved by CompTIA's CAQC program for Security+ 2008 to ensure that managers and their direct reports have a common baseline for security terminology and concepts. You will be able to put what you learn into practice the day you get back into the office.

Knowledge Compression™

Maximize your learning potential!
Knowledge Compression™ is an optional add-on feature to a SANS class that aims to maximize the absorption and long-term retention of large amounts of data over a relatively short period of time. Through the use of specialized training materials, in-class reviews, examinations and test-taking instruction, Knowledge Compression™ ensures students have a solid understanding of the information presented to them. By attending classes that feature this advanced training product, you will experience some of the most intense and rewarding training programs SANS has to offer, in ways that you never thought possible!

SANS Technology Institute
www.sans.edu

www.sans.org/8140

Bundle OnDemand
WITH THIS COURSE
www.sans.org/ondemand

G. Mark Hardy *SANS Certified Instructor*

G. Mark Hardy is founder and president of the National Security Corporation. He has been providing cybersecurity expertise to government, military, and commercial clients for over 30 years, and is an internationally recognized expert who has spoken at over 250 events world-wide. He serves on the Advisory Board of CyberWATCH, an Information Assurance/Information Security Advanced Technology Education Center of the National Science Foundation. A retired U.S. Navy Captain, he was privileged to serve in command nine times, including responsibility for leadership training for 70,000 sailors. He also served as wartime Director, Joint Operations Center for U.S. Pacific Command, and Assistant Director of Technology and Information Management for Naval Logistics in the Pentagon, with responsibility for InfoSec, public key infrastructure, and Internet security. Captain Hardy was awarded the Defense Superior Service Medal, the Legion of Merit, five Meritorious Service Medals, and 24 other medals and decorations. A graduate of Northwestern University, he holds a BS in computer science, BA in mathematics, a master's in business administration, and a master's in strategic studies, and holds the GSLC, CISSP, CISM, and CISA certifications. **@g_mark**

MGT517

Managing Security Operations: Detection, Response, and Intelligence *NEW!*

Five-Day Program
Mon, July 10 - Fri, July 14
9:00am - 5:00pm
30 CPEs
Laptop Required
Instructor: Christopher Crowley

Who Should Attend

- Information security managers
- SOC Managers, Analysts & Engineers
- Information security architects
- IT managers
- Operations managers
- Risk management professionals
- IT/system administration/ network administration professionals
- IT auditors
- Business continuity and disaster recovery staff

"SANS coursework is the most thorough learning available, anywhere. What you learn is not only conceptual, but also hands-on, showing you what to do, why you do it, and how you can apply solutions that you learn to real-world problems."

-Duane Tucker, Barmark Partners

Managing Security Operations covers the design, operation, and ongoing growth of all facets of the security operations capabilities in an organization. An effective Security Operations Center (SOC) has many moving parts and must be designed with the ability to adjust and work within the constraints of the organization. To run a successful SOC, managers need to provide tactical and strategic direction and inform staff of the changing threat environment as well as provide guidance and training for employees. This course covers design, deployment, and operation of the security program to empower leadership through technical excellence.

The course covers the functional areas of Communications, Network Security Monitoring, Threat Intelligence, Incident Response, Forensics, and Self-Assessment. We discuss establishing Security Operations governance for:

- **Business alignment and ongoing adjustment of capabilities and objectives**
- **Designing the SOC and the associated objectives of functional areas**
- **Software and hardware technology required for performance of functions**
- **Knowledge, skills, and abilities of staff as well as staff hiring and training**
- **Execution of ongoing operations**

You will walk out of this course armed with a roadmap to design and operate an effective SOC tailored to the needs of your organization.

Course Author Statement

"The inclusion of all functional areas of security operations is intended to develop a standardized program for an organization and express all necessary capabilities. Admittedly ambitious, the intention of the class is to provide a unified picture of coordination among teams with different skillsets to help the business prevent loss due to poor security practices. I have encountered detrimental compartmentalization in most organizations. There is a tendency for a specialist to look only at her piece of the problem, without understanding the larger scope of information security within an organization. Organizations are likely to perceive a Security Operations Center as a tool, and not as the unification of people, processes, and technologies.

"This course provides a comprehensive picture of a Cyber Security Operations Center (CSOC). Discussion on the technology needed to run a SOC is handled in a vendor agnostic way. In addition, technology is addressed in a way that attempts to address both minimal budgets as well as budgets with global scope. The course outlines staff roles, addresses staff training through internal training and information-sharing, and examines the interaction between functional areas and data exchange.

"After attending this class, the participant will have a roadmap for what needs to be done in an organization seeking to implement security operations."

-Christopher Crowley

Christopher Crowley *SANS Principal Instructor*

Christopher has 15 years of industry experience managing and securing networks. He currently works as an independent consultant in the Washington, DC area. His work experience includes penetration testing, computer network defense, incident response, and forensic analysis. He is the course author for SANS MGT535: Incident Response Team Management and holds the GSEC, GCIA, GCIH (gold), GCFA, GPEN, GREM, GMOB, and CISSP certifications. His teaching experience includes SEC401, SEC503, SEC504, SEC560, SEC575, SEC580, FOR585, and MGT535; Apache web server administration and configuration; and shell programming. He was awarded the SANS 2009 Local Mentor of the Year Award, which is given to SANS Mentors who excel in leading SANS Mentor Training classes in their local communities. **@CCrowMontance**

Bonus Sessions

Enrich your SANS training experience! Evening talks by our instructors and selected subject-matter experts help you broaden your knowledge, hear from the voices that matter in computer security, and get the most for your training dollar.

Tools and Techniques for Assessing Suspected Android Malware

Christopher Crowley

Android malware is substantially more common that iOS malware. Android users can choose to disable the "Unknown sources - Allow installation of apps from unknown sources" and install applications from anywhere. In this talk Christopher Crowley will show tools and techniques you can use to inspect Android applications to determine if they exhibit malicious behavior. This can be employed as forensic analysis and can also be used in application assessments to determine if an application is suitable for use within an organization. We'll discuss a sequence of actions and assessments to perform, in order from the easiest to the most complex, to help attendees to develop a methodology for performing analysis. We'll look at behavioral analysis, static code analysis, and application manipulation (rewriting APKs for modified functionality) as the general techniques of analyzing the Android applications.

Anti-Ransomware: How to Turn the Tables

G. Mark Hardy

"OMG! We just got hit with ransomware!" What you don't usually hear next is "LOL!" You can build defenses that prevent ransomware from paralyzing your organization – we'll show you how. Ransomware is a billion dollar industry, and it's growing tremendously. Lost productivity costs far more than the average ransom, so executives just say, "Pay the darn thing." But what if you could stop ransomware in its tracks? We'll demonstrate tools and methodologies that are battle-proven and ACTUALLY WORK as evidenced by fully contained ransomware "explosions" that went nowhere. We'll offer insights into the future of this attack vector, and venture predictions on how this industry will evolve and what to expect next.

The Red Pill. Become Aware: Squashing Security Misconceptions and More

My-Ngoc Nguyen

"You take the blue pill, the story ends. You wake up in your bed and believe whatever you want to believe. You take the red pill, you stay in wonderland, and I show you how deep the rabbit hole goes." -Morpheus, to Neo

Take the red pill, come join us down this rabbit hole, and get your head out of the sand to better protect yourself, your company/organization, and the things that matter to you (e.g. your loved ones, your finances, your identity). In this presentation, you will get insights on common misconceptions and trends that have led to many breaches, especially those that made headlines. We'll touch on some details from those headlined breaches to show commonalities, address the main misconceptions, describe attackers' approaches, provide some statistics, and most importantly, provide helpful tips applicable to all members of the audience.

Enhance Your Training Experience

Add an
OnDemand Bundle & GIAC Certification Attempt* to your course within seven days of this event for just $689 each.

SPECIAL PRICING

Extend Your Training Experience with an OnDemand Bundle

- Four months of supplemental online review
- 24/7 online access to your course lectures, materials, quizzes, and labs
- Subject-matter-expert support to help you increase your retention of course material

"The course content and OnDemand delivery method have both exceeded my expectations."
-Robert Jones, Team Jones, Inc.

Get Certified with GIAC Certifications

- Distinguish yourself as an information security leader
- 30+ GIAC cybersecurity certifications available
- Two practice exams included
- Four months of access to complete the attempt

"GIAC is the only certification that proves you have hands-on technical skills."
-Christina Ford, Department of Commerce

MORE INFORMATION

www.sans.org/ondemand/bundles www.giac.org

*GIAC and OnDemand Bundles are only available for certain courses.

SANS SECURING THE HUMAN

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The SANS Technology Institute transforms the world's best cybersecurity training and certifications into a comprehensive and rigorous graduate education experience.

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Securing **Approval** and **Budget** for Training

Packaging matters

Write a formal request

- All organizations are different, but because training requires a significant investment of both time and money, most successful training requests are made via a written document (short memo and/or a few powerpoint slides) that justifies the need and benefit. Most managers will respect and value the effort.
- Provide all the necessary information in one place. In addition to your request, provide all the right context by including the summary pages on Why SANS?, the Training Roadmap, the instructor bio, and additional benefits available at our live events or online.

Clearly state the benefits

Be specific

- How does the course relate to the job you need to be doing? Are you establishing baseline skills? Transitioning to a more focused role? Decision-makers need to understand the plan and context for the decision.
- Highlight specifics of what you will be able to do afterwards. Each SANS course description includes a section titled "You Will Be Able To." Be sure to include this in your request so that you make the benefits clear. The clearer the match between the training and what you need to do at work, the better.

Set the context

Establish longer-term expectations

- Information security is a specialized career path within IT, with practices that evolve as attacks change. Because of this, organizations should expect to spend 6%-10% of salaries to keep professionals current and improve their skills. Training for such a dynamic field is an annual, per-person expense, and not a once-and-done item.
- Take a GIAC Certification exam to prove the training worked. Employers value the validation of skills and knowledge that a GIAC Certification provides. Exams are psychometrically designed to establish competency for related job tasks.
- Consider offering trade-offs for the investment. Many professionals build annual training expense into their employment agreements even before joining a company. Some offer to stay for a year after they complete the training.

Future Training Events

Security West — San Diego, CA — May 9-18

Northern Virginia – Reston	Reston, VA	May 21-26
Atlanta	Atlanta, GA	May 30 - June 4
Houston	Houston, TX	June 5-10
San Francisco Summer	San Francisco, CA	June 5-10
Rocky Mountain	Denver, CO	June 12-17
Charlotte	Charlotte, NC	June 12-17
Minneapolis	Minneapolis, MN	June 19-24
Columbia, MD	Columbia, MD	June 26 - July 1
Los Angeles – Long Beach	Long Beach, CA	July 10-15

SANSFIRE — Washington, DC — July 22-29

San Antoniot	San Antonio, TX	Aug 6-11
Boston	Boston, MA	Aug 7-12
New York City	New York, NY	Aug 14-19
Salt Lake City	Salt Lake City, UT	Aug 14-19
Chicago	Chicago, IL	Aug 21-26
Virginia Beach	Virginia Beach, VA	Aug 21 - Sep 1
Tampa – Clearwater	Clearwater, FL	Sep 5-10
San Francisco Fall	San Francisco, CA	Sep 5-10

Network Security — Las Vegas, NV — Sep 10-17

Baltimore	Baltimore, MD	Sep 25-30
Rocky Mountain Fall	Denver, CO	Sep 25-30
Phoenix-Mesa	Mesa, AZ	Oct 9-14

Future Summit Events

Automotive Cybersecurity	Detroit, MI	May 1-8
Security Operations Center	Washington, DC	June 5-12
Digital Forensics	Austin, TX	June 22-29
ICS & Energy	Houston, TX	July 10-15
Security Awareness	Nashville, TN	July 31 - Aug 9
Data Breach	Chicago, IL	Sep 25 - Oct 2

Future Community SANS Events

Local, single-course events are also offered throughout the year via SANS Community. Visit **www.sans.org/community** for up-to-date Community course information.

Hotel Information

Hilton Long Beach
701 West Ocean Boulevard
Long Beach, CA 90831
Phone: 562-983-3400
www.sans.org/event/long-beach-2017/location

Situated in the heart of Long Beach's downtown business district, adjacent to the World Trade Center, the Hilton Long Beach offers comfortable accommodations, deluxe amenities, and exceptional customer service in a classically elegant setting. Conveniently located only seven miles from Long Beach Airport, and just a short drive from LAX, the Hilton Long Beach is surrounded by an array of exciting attractions such as the Aquarium of the Pacific and the legendary Queen Mary.

Special Hotel Rates Available

A special discounted rate of $199.00 S/D will be honored based on space availability.

Government per diem rooms are available with proper ID; you will need to call reservations and ask for the SANS government rate. These rates include high-speed Internet in your room and are only available through **June 16, 2017**. To make reservations, please call **(562) 983-3400** and ask for the SANS group rate.

Top 5 reasons to stay at the Hilton Long Beach

1. All SANS attendees receive complimentary high-speed Internet when booking in the SANS block.
2. No need to factor in daily cab fees and the time associated with travel to alternate hotels.
3. By staying at the Hilton Long Beach you gain the opportunity to further network with your industry peers and remain in the center of the activity surrounding the training event.
4. SANS schedules morning and evening events at the Hilton Long Beach that you won't want to miss!
5. Everything is in one convenient location!

Registration Information

Register online at **www.sans.org/long-beach**

We recommend you register early
to ensure you get your first choice of courses.

Select your course and indicate whether you plan to test for GIAC certification. If the course is still open, the secure, online registration server will accept your registration. Sold-out courses will be removed from the online registration. Everyone with Internet access must complete the online registration form. We do not take registrations by phone.

Pay Early and Save*

Use code **EarlyBird17** when registering early

	DATE	DISCOUNT	DATE	DISCOUNT
Pay & enter code before	**5-17-17**	**$400.00**	**6-7-17**	**$200.00**

*Some restrictions apply. Early bird discounts do not apply to Hosted courses.

SANS Voucher Program

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www.sans.org/vouchers

Cancellation & Access Policy

If an attendee must cancel, a substitute may attend instead. Substitution requests can be made at any time prior to the event start date. All substitution requests must be submitted by email to **registration@sans.org**. If an attendee must cancel and no substitute is available, a refund can be issued for any received payments by **June 21, 2017**. A credit memo can be requested up to the event start date. All cancellation requests must be submitted in writing by mail or fax and received by the stated deadlines. Payments will be refunded by the method that they were submitted. Processing fees will apply.

Open a **SANS Account** today to enjoy these FREE resources:

WEBCASTS

Ask The Expert Webcasts – SANS experts bring current and timely information on relevant topics in IT Security.

Analyst Webcasts – A follow-on to the SANS Analyst Program, Analyst Webcasts provide key information from our whitepapers and surveys.

WhatWorks Webcasts – The SANS WhatWorks webcasts bring powerful customer experiences showing how end users resolved specific IT Security issues.

Tool Talks – Tool Talks are designed to give you a solid understanding of a problem, and to show how a vendor's commercial tool can be used to solve or mitigate that problem.

NEWSLETTERS

NewsBites – Twice-weekly high-level executive summary of the most important news relevant to cybersecurity professionals

OUCH! – The world's leading monthly free security-awareness newsletter designed for the common computer user

@RISK: The Consensus Security Alert – A reliable weekly summary of (1) newly discovered attack vectors, (2) vulnerabilities with active new exploits, (3) how recent attacks worked, and (4) other valuable data

OTHER FREE RESOURCES

- InfoSec Reading Room
- Top 25 Software Errors
- 20 Critical Controls
- Security Policies
- Intrusion Detection FAQs
- Tip of the Day
- Security Posters
- Thought Leaders
- 20 Coolest Careers
- Security Glossary
- SCORE (Security Consensus Operational Readiness Evaluation)

www.sans.org/account