



# **DxCERTS<sup>SM</sup>**

**IT & NIST Cybersecurity Workforce Development  
Training Curriculum & Management Program**

**By**

**Rick Lemieux & David Nichols**

**January 2019**

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

### ***Copyright and Trademark Notice***

Copyright © 2018 itSM Publishing. itSM Solutions® is a Registered Trademark of itSM Solutions LLC. ITIL® is a Registered Trademark, and a Registered Community Trademark of the Axelos, and is registered in the U.S. Patent and Trademark Office and is used here by itSM Solutions LLC under license from and with the permission of Axelos (Trademark License No. 0002). Other product names mentioned in this guide may be trademarks or registered trademarks of their respective companies.

### ***Notice of Rights / Restricted Rights Legend***

All rights reserved. No title or ownership of this document, any portion thereof, or its contents is transferred. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of itSM Solutions LLC. Reproduction prohibitions do not apply to this document when reproduced for non-commercial use, or to excerpts or quotes for use in reviews or attributed quotes in other works of any type as allowed for in copyright law. For additional information, please contact:

itSM Solutions LLC  
742 Mink Ave #135  
Murrells Inlet  
South Carolina, 29576  
401-480-5872  
Web <http://www.itSMSolutions.com>

### ***Notice of Liability***

This guide is distributed "As Is," without warranty of any kind, either express or implied, respecting the content of this guide, including but not limited to implied warranties for the guide's quality, performance, merchantability, or fitness for any particular purpose. Neither the authors, nor itSM Solutions LLC, its dealers or distributors shall be liable with respect to any liability, loss or damage caused or alleged to have been caused directly or indirectly by the contents of this whitepaper.

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

### ***DxCERTS IT & NIST Cybersecurity Training Curriculum***

Today, due to the ever-changing threat landscape created by **Digital Transformation (DX)** programs (IoT, Mobile, Cloud etc.) and a very sophisticated network of threat actors (i.e., the bad guys) enterprises need to build a workforce capable of engineering, maintaining and improving the best practice frameworks and methodologies required to identify, protect, detect, respond and recover from cyber-attacks.

itSM Solutions NISTCSF.COM is a global consortium of academic, government and industry thought leaders working together to create Digital Transformation (DX) IT and Cybersecurity Training Curriculum (**DxCERTS<sup>SM</sup>**) that teaches the knowledge, skills and abilities to operationalize the frameworks and methodologies created by the National Institute of Standards and Technologies (NIST) and other internationally recognized institutes and organizations.

The consortium's focus is to create licensable assessment, curriculum and train-trainer-services that will provide an affordable and scalable way for other academic and commercial institutions to offer these programs as part of their IT & Cybersecurity workforce development program.

**NISTCSF.COM UMass Lowell NIST Cybersecurity Framework NCSF-CFM certification training programs were recently featured in the [National CyberWatch Center 2018 Innovations in Cybersecurity Education magazine](#).**

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

### ***DxCERTS IT & NIST Cybersecurity Frameworks & Methodologies***

NISTCSF.COM Best Practice Frameworks and Methodologies curriculum areas include.

**NIST Cyber Security Framework** provides guidance and training's on how enterprises can proactively manage and improve its Cybersecurity risk by operationalizing the controls (Center for Internet Security) and management systems (ISO 27001, NIST 800-53 etc.) outlined in the framework.

**NICE Cybersecurity Workforce Framework** provides guidance and training's on how enterprises can proactively manage and improve its IT and Cybersecurity workforce by following the guidance outlined in the framework.

**RESILIA™ Cyber Resilience Framework** provides guidance and training's on how digital enterprises can proactively manage and improve a cyber service portfolio in terms of business resiliency and recovery.

**ITIL® Service Management Framework** provides guidance and training's on how digital enterprises can proactively manage and improve a cyber service portfolio in terms of agility, development, operations, cost, quality and compliance.

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

**COBIT Governance Framework** provides guidance and training's on how digital enterprises can proactively manage and improve a cyber service portfolio in terms of risk policies and controls.

**ISO/IEC 20000 Service Management Framework** provides guidance and training's for service provider to plan, establish, implement, operate, monitor, review, maintain and improve a Service Management System (SMS). The requirements include the design, transition, delivery and improvement of services to fulfill agreed service requirements.

**Digital Enterprise Readiness Framework** provides guidance and training's on how digital enterprises can manage and improve a cyber business in terms of operational sustainability, organizational agility, strategic agility, and operating within a disruptive culture.

**Cloud Security Alliance Framework** provides guidance on how digital enterprises can adopt the cloud paradigm safely and securely.

**DEVSECOPS Framework** provides guidance and trainings on how to automate the processes between software development and IT teams, in order that they can build, test, and release secure software faster and more reliably.

**FAIR Value at Risk (VaR) Framework** provides guidance and trainings on a best practice approach to measure, manage and report on information risk from the business perspective.

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

**Software & Application Testing Methodology** provides guidance and training's on how digital enterprises can make software systems and applications safer regardless of their operating environment (web, IoT, Cloud)

**PMI PMBOK Framework & PRINCE 2® Project Management** provide guidance and training's on how digital enterprises can improve the success of its cyber service projects by using knowledge and techniques that result in desired business outcomes.

### ***DxCERTS Training Curriculum Catalog***

itSM Solutions NISTCSF.COM role-based curriculum solutions enable's enterprises to build a workforce capable of operationalizing, maintaining and improving IT & Cybersecurity best practice frameworks, methodologies and technologies across an enterprise and its supply chain.

[Click here](#) to learn more about our Curriculum Licensing and Train-the-Trainer programs.

[Click here](#) to read NIST Special Publication 800-181 – NICE Cybersecurity Workforce Framework.

## DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program

---

IT Service, Project, Cybersecurity & Cloud Mgmt. Training				IT Networking, Programming & INFOSEC Training			Business & Cyber Skills Training	
IT Service Management	IT Project Management	Cybersecurity Management	IT Cloud Management	Software Programming	IT Networking	Information Security	Microsoft Office Skills	General Business Skills
27 Courses	17 Courses	15 Courses	11 Courses	24 Courses	45 Courses	30 Courses	68 Courses	31 Courses
ITIL V3 ITIL V4 RESILIA COBIT ISO20000 DEVOPS DIGITAL READINESS AGILEshifT SAFE	PMI PRINCE2 AGILE SCRUM	NIST CSF NIST 800-171 COBIT ISO27001 FAIR VaR DEVSECOPS	AZURE AWS COMPTIA SHAREPOINT SQL SERVER CLOUD SECURITY	C+ C++ JAVA PYTHON RUBY ANGULAR 5 ASP.NET HADOOP PERL SQL 2014 RESTFUL SELENIUM BOOT STRAP SECURE CODING	Microsoft Cisco COMPTIA VMware	ISC2 ISACA COMPTIA MILE2 CyberSec First Responder IoT	O365 END USER O365 ADMIN O365 SHAREPOINT O365 WEB APPS WORD EXCEL POWERPOINT OUTLOOK ACCESS PROJECT LYNX DATA ANALYSIS	HR LEGAL ACCOUNTING CYBERSECURITY IOT Awareness SOCIAL MEDIA COMMUNICATIONS COMPUTERS INTERNET SHAREPOINT PROJECT MGMT.

Note: Items in **RED** are in the planning or development stage

### Curriculum Delivery Formats

- **Video Instructor Led Self-Paced Video Training with Online Mentoring**
- **Video Instructor Led Self-Paced Blended Team Training with Self-Paced Videos and Digital Courseware plus**
- **Instructor Led Online or Onsite Review Sessions**
- **Instructor Led Onsite Public Open Enrollment Training Classes with Digital Book or Print Courseware**
- **Instructor Led Onsite Team Training Classes with Digital Book or Print Courseware**
- **Instructor Led Onsite Team Training with Self-Paced Videos and Digital Courseware**
- **Instructor Led Virtual Public Open Enrollment Training Classes with Digital Book or Print Courseware**
- **Instructor Led Virtual Team Training Classes with Digital Book or Print Courseware**

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

### **Curriculum Benefits**

- **NIST & NICE Aligned Curriculum**
- **Role Based Training Curriculum** – With a focus on Engineering, Operations, Specialty Role & Risk Management professionals
- **Accredited, White Label, Print, Digital Book and Video Curriculum**
- **Cyber Range Skills Training Programs and Advisory Services**
- **100% Priced Right** (no student left behind)
- **Client Branded Learning Management System (LMS)** for Student Enablement, Mentoring & Reporting Services
- **Instructor Led Delivery or Mentoring Sessions** can be added to any program
- **Instructor Train-the Trainer Sessions** delivered online – no travel required
- **Workforce Planning** and Launch Services
- **New Curriculum Planning** and Development Services

### **Career Pathway Programs**

- **Cybersecurity Management** (NIST Cybersecurity Framework, NIST 800-171 etc.)
- **Cyber Resilience Management (RESILIA)**
- **IT Service Management (ITIL V3, ITIL V4)**
- **IT Governance Management (COBIT5)**
- **IT Project Management (PMP, PRINCE2, SCRUM, AGILE)**
- **Software & Application Launch Management (DEVOPS & DEVSECOPS)**
- **Cloud Management (AMAZON, AZURE etc.)**



## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

- **IoT** (Awareness & Practitioner)
- **Enterprise Digital Transformation Management** (IDT Foundation & Practitioner)
- **Enterprise AGILITY Management** (AGILEshift)
- **Enterprise RISK Management** (FAIR Institute)
- **Cybersecurity Workforce Development** (NICE Cybersecurity Workforce Framework)
- **Cloud Security** (Cloud Security Alliance)
- **Information Security** (CISSP, CISA, CISM, Security+, Ethical Hacker etc.)
- **Secure Coding** (Software & Application Development)
- **Software Development** (C+, C++, JAVA, PYTHON, RUBY, ANGULAR 5, ASP.NET etc.)
- **Network Engineering** (Microsoft, Cisco, CompTIA & VMware)
- **Microsoft Office** (Office 365, SKYPE, Lync, Word, PowerPoint, Excel etc.)
- **Business Skills** (Communication Skills, Social Media, Accounting, Legal, HR etc.)

### ***DxCERTS “All Access” Enterprise Subscription Program***

The DxCERTS “All Access” enterprise subscription program enables enterprises of any size to assign to its organization the NIST/NICE IT and Cybersecurity training programs required to learn the knowledge, skills and abilities to identify, protect, detect, respond and recover from cyber-attacks.






## DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program

This affordable, easy to use training and management program not only helps organizations get the right training to the right person at the right time at the right price but also equips management teams (HR, Learning & Development and Department Managers) with the management and reporting tools necessary to ensure a successful training outcome for both the student and employer. The DxCERTS “All Access” subscription program also provides enterprises with the capability to create the “workforce skills report” that might be required during an internal or governmental audit of an organizations IT and Cybersecurity workforce.

### DxCERTS<sup>SM</sup> “All Access”

**IT & NIST Cybersecurity Enterprise Training Curriculum & Learning Management System**

Subscription Options: 1 to 3 Year Subscription Options	Management Options; Client Branded Portal with Student Monitoring & Reporting
Hosting Options: itSM Solutions or Client Hosted	Training Options; Individual or Organizational Transformation Trainings

<b>On-Demand</b>	<b>Individual or Group Career Pathway Programs</b>																																		
<b>Accredited Programs</b>  <ul style="list-style-type: none"> <li>&gt; 250+ certification training videos</li> <li>&gt; Digital Courseware</li> <li>&gt; Online Mentoring</li> <li>&gt; Online Learner Management</li> <li>&gt; Certificate of Completion</li> <li>&gt; Continuing Ed Credits</li> </ul>	<b>Video Learning &amp; Quizzes</b> 	<b>Digital Courseware</b> 	<b>Multi-touch learning</b>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #00a6c9; color: white;"><b>Cybersecurity Management</b></td> <td>NIST CSF</td> <td>ISCS*</td> <td>CompTIA</td> <td>ISACA</td> <td>MILE2</td> </tr> <tr> <td style="background-color: #00a6c9; color: white;"><b>Service &amp; Project Management</b></td> <td>ITIL</td> <td>COBIT</td> <td>RESILIA</td> <td>PMI</td> <td>AGILE/ SCRUM</td> </tr> <tr> <td style="background-color: #00a6c9; color: white;"><b>Networking &amp; Cloud Mgmt.</b></td> <td>Microsoft</td> <td>Cisco</td> <td>CompTIA</td> <td>VMware</td> <td>CSA</td> </tr> <tr> <td style="background-color: #00a6c9; color: white;"><b>Software Programming</b></td> <td>C+</td> <td>C++</td> <td>Java</td> <td>Python</td> <td>Ruby</td> </tr> <tr> <td style="background-color: #00a6c9; color: white;"><b>Business Skills</b></td> <td>Microsoft Office</td> <td>HR</td> <td>Legal</td> <td>Finance</td> <td>Social Media</td> </tr> </table>	<b>Cybersecurity Management</b>	NIST CSF	ISCS*	CompTIA	ISACA	MILE2	<b>Service &amp; Project Management</b>	ITIL	COBIT	RESILIA	PMI	AGILE/ SCRUM	<b>Networking &amp; Cloud Mgmt.</b>	Microsoft	Cisco	CompTIA	VMware	CSA	<b>Software Programming</b>	C+	C++	Java	Python	Ruby	<b>Business Skills</b>	Microsoft Office	HR	Legal	Finance	Social Media
<b>Cybersecurity Management</b>	NIST CSF	ISCS*	CompTIA	ISACA	MILE2																														
<b>Service &amp; Project Management</b>	ITIL	COBIT	RESILIA	PMI	AGILE/ SCRUM																														
<b>Networking &amp; Cloud Mgmt.</b>	Microsoft	Cisco	CompTIA	VMware	CSA																														
<b>Software Programming</b>	C+	C++	Java	Python	Ruby																														
<b>Business Skills</b>	Microsoft Office	HR	Legal	Finance	Social Media																														
<b>Checkpoints &amp; Sample Papers</b> 	<b>Online Mentoring &amp; Learner Management</b> 		<b>Global Reach</b>		<b>Customization and New Program Development Options</b>																														

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

### **Disney**

Getting widespread adoption of a new method or way of working in such a large organization is no mean feat. ‘With over 700 domestic IT cast, we simply can’t adopt large-scale change overnight,’ he explains. ‘Where I talk about best practice and ITIL integration, at the start of the process, the staff only know how we do business. They are unaware of both ITIL and our interest in it. The first step is to make them part of Disney’s ITIL® Journey.

[Click here](#) to learn more about the enterprise program we built for Disney

### **Internal Revenue Service (IRS)**

Rick Lemieux from itSM Solutions was involved in helping the IRS roll out its ITIL training programme from the beginning. ‘ITIL V3’s focus on continual service improvement and putting the customer first fit well with the IRS’s objectives, so we took some time educating the executive teams on the benefits of ITIL V3. This wasn’t a hard sell because everyone could see the synergy there but understanding the fit doesn’t mean you can roll it out instantly.

[Click here](#) to learn more about the enterprise program we built for the IRS.

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

### ***NISTCSF.COM Curriculum Consortium Partners***

The following companies have come together to provide the operational infrastructure to support the NISTCSF.COM curriculum consortium.

#### **Reseller Partners**

NISTCSF.COM has partnered with academic and private institutions to deliver the NISTCSF.COM assessment and workforce development programs. Inaugural partners include New Horizons Computer Learning Centers, LRS Education Services, University of West Florida, Bryant University, GRC Sphere and Babbage Simmel.

#### **Print and Digital Book Distribution**

NISTCSF.COM has partnered with Arvato Training & Education Services a global eCommerce platform an integrated eReader application which delivers print and digital book versions of the NISTCSF.COM curricula to students anywhere in the world. Arvato is currently the exclusive delivery partner for Microsoft training and consulting education solutions worldwide.

#### **Platform Partners**

NISTCSF.COM has partnered with leading Assessment, Learning Management and Simulation platform companies to deliver affordable training solutions for today's cyber enterprise. Inaugural partners include Career Academy and CyberSaint.

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

### **Authoring Partners**

NISTCSF.COM's inaugural program NIST Cybersecurity Framework – Controls Factory Model™ (NCSF-CFM), was built in partnership with UMass Lowell (UML) a NSA/DHS National Center of Academic Excellence in Cyber Defense Research (CAE-R). NISTCSF.COM has since formed strategic partnerships with Axelos creator of the ITIL®, RESILIA® and PRINCE2 frameworks & methodologies, ISACA creator of the COBIT framework, The Institute for Digital Transformation creator of the Digital Enterprise Readiness Framework (DERF) and other academic and private industry partners to build out the rest of the NISTCSF.COM portfolio.

### **Publishing Partners**

NISTCSF.COM has partnered with itSM Solutions to create assessment, remediation, certification and simulation training solutions for today's cyber enterprise

### **Accreditation Partners**

NISTCSF.COM has partnered with APMG for content accreditation and exam delivery services.

### ***Summary***

Three things are certain: first, digital services are now at the center of most businesses; second, business is a moving target, third organizations are under attack from those trying to steal the information companies rely on for daily business operations and revenue.

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

The itSM Solutions DxCERTS training curriculum and learning management system enables enterprises of any size to create a workforce capable of identifying, protecting, detecting, responding and recovering from cyber-attacks.

## **DxCERTS - IT & NIST Cybersecurity Workforce Development Training Curriculum & Management Program**

---

### ***About itSM Solutions LLC***

itSM Solutions LLC is an accredited content publishing company specializing in the creation of assessment, certification and skills training content for Information Technology (IT) and NIST Cybersecurity professionals. itSM's training solutions have been adopted by the who's who of industry including HPE, Microsoft, Disney, Cisco, IRS, Navy, Lowes, Staples, Genzyme, Boeing, Intel, Molina Healthcare and many others.

itSM Solutions is also the founder of NISTCSF.COM a global consortium of academic, government and industry thought leaders working together to create Cybersecurity training programs that help organizations operationalize, maintain and improve the frameworks and methods created by the National Institute of Standards & Technologies (NIST), the National Institute of Cybersecurity Education (NICE) and other internationally recognized institutes and standards organizations. The consortium's goal is to provide academia and enterprises with an affordable and scalable way to train, skill and certify today's Cybersecurity workforce.

### ***About the Authors***

**David Nichols** is the President and CEO of itSM Solutions LLC, an ITSM consulting and training company. He has over 40 years experience in Information Technology. As an early adopter of the IT Service Management processes as described in the IT Infrastructure Library (ITIL), he has utilized his hardware and software engineering background as a foundation for implementing sweeping changes in how IT Services are delivered at several fortune 100 companies in the US. Working closely with the executive management teams, David has helped the strategic goals of the IT organization with those of the company and develop a more effective IT Strategy. Strategies that are customer focused, process-oriented and cost/performance optimized, and help business and IT organization establish the value of IT Services. David holds ITSM Service Manager certification.

**Rick Lemieux** is a managing partner and the Vice President of Business Development. He is responsible for overseeing the company's Sales, Marketing & Business Development programs. Rick has been involved in selling IT solutions for the past 30 years. Prior to itSM, Rick, an early proponent of ITSM and ITIL, led the Sales and Business Development teams at software companies focused on automating the best practices guidance outlined in ITIL. Rick holds a Foundation Certificate in IT Service Management and was recently identified as one of the top 5 IT Entrepreneurs in the State of Rhode Island by the TECH 10 awards.