



DxCERTSSM

**IT & NIST Cybersecurity
Training Curriculum & Student Management Platform**

By

Rick Lemieux & David Nichols

January 2019

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.itmsolutions.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 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 (DxCERTSSM) that teaches the knowledge, skills and abilities to operationalize the frameworks and methodologies created by the **National Institute of Standards and Technologies (NIST)**, **National Initiative for Cybersecurity Education (NICE)**, **Axelos**, **ISACA**, **The Digital Transformation Institute** 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.

DxCERTS - IT & NIST Cybersecurity Training Solutions

DxCERTS Curriculum Catalog

itSM Solutions DxCERTS curriculum enables enterprises of any size 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 see or download out detailed course catalog

[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.

Curriculum Tracks & Career Pathways

DxCERTS Enterprise Career Pathways	Digital Transformation Readiness Framework Curriculum	NIST Cybersecurity & RESILIA Cyber Resilience Framework Curriculum	Digital Service Management & Digital Governance Framework Curriculum	NICE Cybersecurity Workforce Framework Information Security Curriculum	NICE Cybersecurity Workforce Framework Network & Systems Admin Curriculum	NICE Cybersecurity Workforce Framework Cloud Management Curriculum	NICE Cybersecurity Workforce Framework Software Programming Curriculum	NICE Cybersecurity Workforce Framework Project Management Curriculum	NICE Cybersecurity Workforce Framework Business Skills Curriculum
Pathway Description	This DxCERTS training and mentoring program enables students to learn the knowledge, skills and abilities to operationalize the digital transformation best practices outlined in the Digital Transformation Readiness Framework	This DxCERTS training and mentoring program enables students to learn the knowledge, skills and abilities to operationalize the the cybersecurity and cyber resilience best practices outlined in the NIST Cybersecurity and RESILIA Cyber Resilience Frameworks	This DxCERTS training and mentoring program enables students to learn the knowledge, skills and abilities to operationalize the Service Management and Governance best practices outlined in the ITIL and Cobit Frameworks	This DxCERTS training and mentoring program enables students to learn the knowledge, skills and abilities to perform the information security workforce roles outlined in the NICE Cybersecurity Framework	This DxCERTS training and mentoring program enables students to learn the knowledge, skills and abilities to perform the network and administration workforce roles outlined in the NICE Cybersecurity Framework	This DxCERTS training and mentoring program enables students to learn the knowledge, skills and abilities to perform the cloud management workforce roles outlined in the NICE Cybersecurity Framework	This DxCERTS training and mentoring program enables students to learn the knowledge, skills and abilities to perform the application and software development workforce roles outlined in the NICE Cybersecurity Framework	This DxCERTS training and mentoring program enables students to learn the knowledge, skills and abilities to perform the project & program management workforce roles outlined in the NICE Cybersecurity Framework	This DxCERTS training and mentoring program enables students to learn the business skills necessary to communicate and work with the various lines of business within an enterprise
Pathway Roles	DTRF Engineer DTRF Operations Analyst DTRF Business Analyst DTRF Expert Practitioner	NISTCSF Engineer NISTCSF Operations Analyst NISTCSF Business Analyst NISTCSF Risk Management Analyst Cyber Resilience Engineer Cyber Resilience Operations Analyst Cyber Resilience Business Analyst	ITSM Engineer ITSM Operations Analyst ITSM Business Analyst ITSM Expert Practitioner ITSM AGILE Practitioner ITSM Governance Practitioner DEVOPS Practitioner	INFOSEC Engineer INFOSEC Operations Analyst INFOSEC Business Analyst INFOSEC Specialist Ethical Hacker, Pen Tester, Vulnerability Assessor, Forensics Investigator, First Responder, Wireless Network Professional, Auditor, Manager / Officer, Healthcare Professional, Secure Web Analyst, Disaster Recovery Analyst	Microsoft MCSA Microsoft MCSE Cisco CCNA Cisco CCNP VMware Professional CompTIA PC Specialist CompTIA Server Specialist CompTIA Network Specialist CompTIA Cloud Specialist CompTIA Linux Specialist CompTIA Healthcare Technician	Amazon Web Services Engineer Amazon Web Services Operations Analyst Microsoft Azure Engineer Microsoft Azure Operations Analyst	Software & Application Developer JavaScript Specialist, ASP.NET Specialist, Angular 5 Specialist, SQL Server Specialist, C# Specialist, C++ Specialist, Python Specialist, Rust Specialist, Ruby Specialist, Hadoop Specialist, PERL Specialist, RESTful Specialist, Bootstrap Specialist, Selenium Specialist	Project Management Professional SCRUM Professional AGILE Professional RISLE Management Professional	Enterprise Business Skills Cybersecurity Awareness, Operating Systems, SharePoint, Internet & Core Computing, Legal, Web Design, Accounting, Social Media, Human Resources, Communication Skills, Time Management Skills, Thinking Critically, Business Etiquette, Customer Service
Certification Bodies	APMG International	APMG International Axelos / Peoplecert	Axelos / Peoplecert ISACA	CompTIA ISC2 ISACA MILE2	CompTIA Microsoft Cisco Vmware	Amazon Microsoft	Various	Project Management Institute (PMI) Axelos SCRUMstudy	Various
Alignment with NICE Cybersecurity Workforce Categories	Oversee & Govern	Securely Provision Operate & Maintain Protect & Defend Oversee & Govern Collect & Operate Analyze	Securely Provision Operate & Maintain Protect & Defend Oversee & Govern Collect & Operate Investigate Analyze	Securely Provision Operate & Maintain Protect & Defend Oversee & Govern Collect & Operate Investigate Analyze	Securely Provision Operate & Maintain Protect & Defend	Securely Provision Operate & Maintain Protect & Defend	Securely Provision Operate & Maintain Protect & Defend	Oversee & Govern	Oversee & Govern

Curriculum Delivery Formats

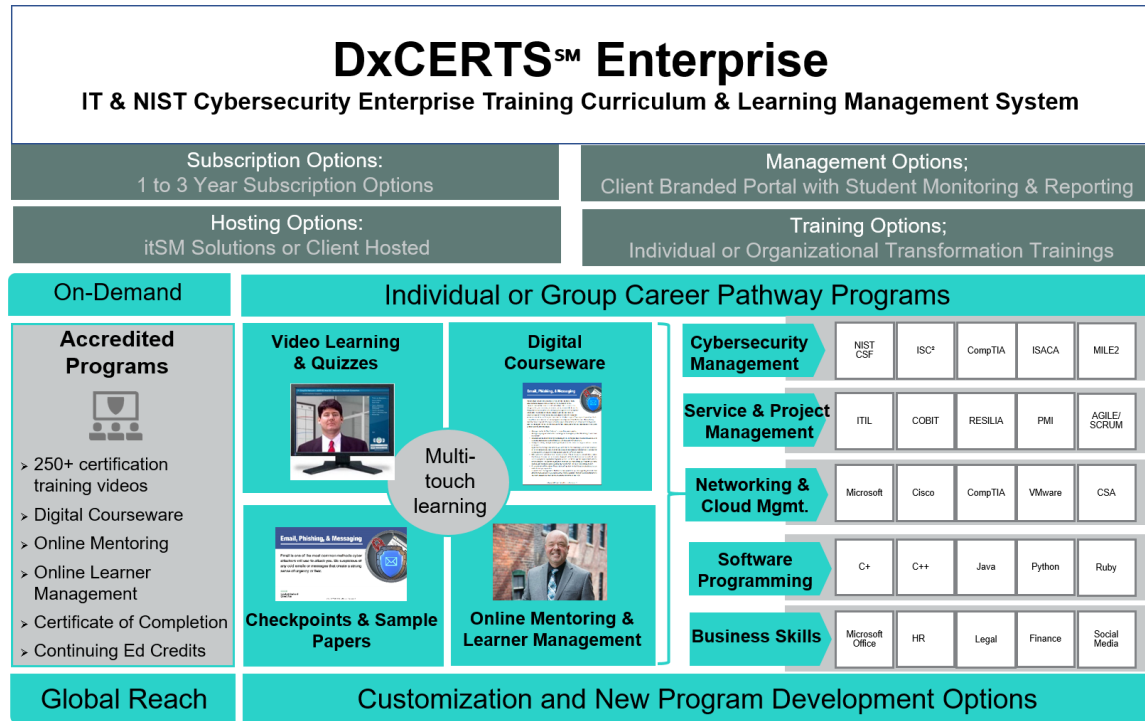
- **Video Training with Online Courseware, Testing & Mentoring**
- **Video Training with Online Courseware, Testing, Mentoring & Instructor Review**
- **Instructor Led Onsite or Online Public Open Enrollment Training Classes**
- **Instructor Led Onsite or Online Team Training Classes**

DxCERTS Enterprise Subscription Program

The DxCERTS 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.

This affordable, easy to use training and student management platform 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 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 organization’s IT and Cybersecurity workforce.

DxCERTS - IT & NIST Cybersecurity Training Solutions



Disney

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

Disney

Internal Revenue Service (IRS)

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

IRS.

Curriculum Benefits

Listed below are the five reasons your university, training company or enterprise learning and development organization should partner with itSM

Solutions for its DxCERTS IT & NIST Cybersecurity workforce development program.

- **DxCERTS career pathway programs are aligned with the industry leading IT & Cybersecurity frameworks** and methodologies being adopted and operationalized by enterprises across the globe. These frameworks include the NIST Cybersecurity Framework, the NICE Cybersecurity Workforce Framework, the ITIL, RESILIA and Cobit Frameworks and the Digital Transformation Readiness Framework. DxCERTS NIST Cybersecurity Framework certification training programs created in partnership with UMass Lowell was recently featured in the National CyberWatch Center 2018 Innovations in Cybersecurity Education magazine.
- **DxCERTS enterprise subscription program** enables organizations to affordably configure an IT & Cybersecurity career pathway training program for all of its employees.
- **DxCERTS flexible delivery options** enable the the program to be adapted to any organizational structure and training schedule
- **DxCERTS online LMS Student Monitoring, Mentoring & Reporting** platform ensures a successful outcome for both the student and employer

- **DxCERTS online instructor Train-the Trainer** program enables enterprises to quickly stand-up its own delivery and mentoring force

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.

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.

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

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.